



INSIDE DOPE

by GEORGE F. TAUBENECK

Gag of the Week
We Hit the Jackpot
You'll Like Some of Our
Other Books, Too
'Alfred Street'
'It Happened In Detroit'
'Nectar & Oolie'
You, Too, Etc.

Gag of the Week

In discussing the possible competition of television at a recent convention of the Book Manufacturers Institute, one publisher opined:

"There are a lot of other things in the home that compete with books, including decks of cards and bottles of whiskey.

"Lots of people also are not reading themselves to sleep. They're going to bed with other people instead, and this also is bad for the book business."

We Hit the Jackpot

Speaking of books, we'd like to tell you about one of ours which has hit a "jackpot." (As steady readers of "Inside Dope" will recall, our hobby is producing an extraordinary book of general interest now and then through our Conjure House division.)

Last November we published a honey of a mystery story entitled, "The Mysteries of Blair House," by Roy Eastman. Although it's priced at only \$2.75, we knocked ourselves out to make it a handsome, unusual book—printed in two colors, with "mood" illustrations, etc.

Well, it has just been selected as one of the Fifty Best Books of the year by the American Institute of Graphic Arts—an honor akin to getting an "Oscar" in Hollywood. Those of you who already own "The Mysteries of Blair House" should hang onto it, because it will increase in value quickly.

And to readers who haven't ordered it yet (write "Dope" at once if you want one of the remaining copies of this "collector's item"—first edition) here are a few unsolicited testimonials from men you may know:

"You have done a very excellent job, both in authoring books and in selecting the ones that you wish to print and publish by other authors. I have to agree with all that was said on the cover regarding the 'Mysteries of Blair House.' It was one of the best whodunits that I have ever read, and I enjoyed every bit of it. I was also tremendously impressed with your novel, 'No Other Star'."—GEORGE S. JONES, JR., Vice President, Servel, Inc.

"Well, I've read 'The Mysteries of Blair House,' and what's more, I had to wait until nearly midnight last night until my good wife finished reading it. She got so close to the end she could not lay it down. It truly is a superb story, one worthy to rank alongside of the famous Sherlock Holmes stories."—F. I. LACKENS, Advertising manager, The Hays Corp., Michigan City, Ind.

"My copy of 'Blair House' arrived a day or so ago, and its looks are everything you claim for it. You can be mighty proud of the beautiful typography, illustrations, and binding. It's the best-looking book I've seen in ages. Congrats."—WM. K. BEARD, JR., Vice President, McGraw-Hill Publishing Co., Inc.

"The Mysteries of Blair House" is a very interesting and exciting book. My brother started reading my copy while home for Christmas but wasn't able to finish. So, of course, there's nothing to do but have a copy for him. For the enclosed check of \$2.82 will you please send another copy as

(Concluded on Page 30, Column 1)

NARC, Pipefitters Agree on Plan To Train Apprentices

CHICAGO—The directors of the National Association of Refrigeration Contractors have approved a joint resolution in which NARC acknowledges that the United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada (AFL) has sole jurisdiction in the refrigeration and air conditioning industry.

Also in the resolution, the United Association acknowledges that NARC is the national association representing the industry and that NARC's local chapters are the bona fide bargaining agents for labor agreements.

In addition, the two organizations agree to mutually undertake an apprentice training program for the industry.

The resolution was signed by representatives of both groups at a special conference in Miami March 18 and 19. It was approved later by NARC directors at their regular quarterly meeting.

NARC was represented at the Miami meeting (the fourth such conference) by Harvey O. Miller, Chicago.

(Concluded on Page 4, Column 4)

Norge Realigns Sales Directors

DETROIT—Sweeping changes in the sales organization of the Norge Div. of Borg-Warner Corp. were announced here recently by H. L. Clary, director of sales.

These included:

1. Elimination of the post of general sales manager upon the resignation of W. S. Law effective May 1. Law will join a Norge distributorship at that time and will announce his new connection in the near future.

2. Creation of two new executive posts—a merchandise manager and a field manager. The former will be filled by J. R. Cameron, presently serving as assistant to Harry L. Spencer, director of manufacturing. The latter will be given to R. C. Connell, gas range sales manager.

3. Appointment of Dean Spencer as refrigeration sales manager in charge of domestic refrigerator, home

(Concluded on Page 33, Column 4)

IN THIS ISSUE

A year-round merchandising program developed by a Pennsylvania dealer sells more than 300 home freezers a year. An article on page 8 reveals how it's done.

"High velocity air distribution systems are coming into their own now for air conditioning," says V. M. Lathers of Barber-Colman Co. His views on this and other matters pertaining to controls and air distribution are reported on page 6.

Taking prospective customers on an inspection tour of his locker plant is one of the promotion stunts used by a Denver operator. He has dreamed up some other out-of-the-ordinary ideas, too. See page 20.

An article on page 16 tells how aluminum anodizing tanks at plants of Reynolds Metals Co. are maintained at 70-72° by two large water-cooling systems.

Departments: What's New, pages 26-27. . . Off the Chest, page 24. . . P. B. Reed, page 35. . . Editorial, page 18. . . Telling & Selling, page 28. . . Patents, page 34. . . Key to Air Conditioning, page 23. . . World Trade News, page 22.

REMA Is Urged To Continue Its Many Projects

Members Hear Reports on
Educational Conferences,
Industry Show, Other Items

CHICAGO—Refrigeration Equipment Manufacturers Association, which has just passed a year filled with organizational changes and new projects, reported favorable progress on all counts as officers reported to the membership at the association's annual meeting here last week.

One more organizational change was announced at the meeting: R. Kennedy Hanson resigned as director of the All-Industry Refrigeration & Air Conditioning Exhibition, and W. Vernon Brumbaugh, executive secretary of Rema, and George E. Mills, assistant executive secretary, will take over direction of the show. Good progress was reported on initial preparations and sale of space for the show, with 315 exhibit spaces already allotted.

K. B. Thorndike, vice president, Detroit Lubricator Co., was elected president of Rema for the coming year, succeeding H. F. Hildreth, Refrigeration Specialties Department, Westinghouse Electric Corp. Other officers are R. H. Israel, Virginia Smelting Co., vice president; W. A. Siegfried, Superior Valve & Fittings Co., treasurer; and W. J. Steplflug,

(Concluded on Back Page, Column 1)

'Selective Selling' Program Set by Ajax

CHICAGO—A new approach to the distribution and merchandising of packaged air conditioning equipment is being fostered by Ajax Corp. of America here, in its "selective selling" plan for its line of air conditioners.

The Chicago manufacturer of "Roomaster" and "Storemaster" units is basing its plan on merchandising principles which Ajax's President Lionel Marks says were developed or proved outside of the industry and which have been used in some cases by alert individual dealers in the air conditioning field.

Ajax's merchandising plan consists of the following major provisions:

1. Appointment of exclusive distributors in each territory, with the distributor doing the merchandising to the customer.

2. National advertising in consumer advertising to back up Ajax distributors' local efforts. The parent company prepares newspaper advertising, sales manuals, booklets, direct-mail

(Concluded on Page 4, Column 1)

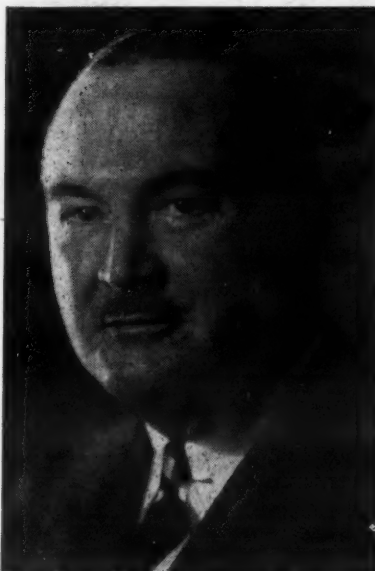
Bess Resumes Post at Noma Electric Corp.

NEW YORK CITY—John M. Bess, who resigned his executive connection with Noma Electric Corp. about a year ago, to devote himself to several independent reorganization projects, has resumed his former position as executive vice president of Noma Electric Corp. of Maryland.



This is the equipment and appliance branch of Noma operations and includes the Refrigeration Corp. of America, Estate-Heatrola, and K-D Lamp Div.

New Rema President



K. B. THORNDIKE

Norge Adds Cheaper Self-Defroster Model

DETROIT—Supported by a comprehensive advertising and sales promotion campaign, a new refrigerator which "provides built-in automatic defrosting at a new low price" has been introduced by the Norge Div. of Borg-Warner Corp.

H. L. Clary, director of sales, said the refrigerator, with a retail sales tag of \$269.95, will sell nationally for approximately \$30 less than the next lowest-priced Norge refrigerator with the exclusive "self-d-frosting" feature.

It is an 8-cu. ft. model, with storage capacity for 27 lbs. of frozen food, space on the beverage shelf for more than a case of 12-oz. bottles and, among other features, has a "fold-away" shelf for greater flexibility in food package arrangement.

Virtually every sales promotion and advertising tool available is being used in the presentation of this new model, according to Clary. He termed this program "the most aggressive and comprehensive and best coordinated" ever employed by the company for any single product.

(Concluded on Page 33, Column 2)

Ohio Dealers Seek Law To Stop Utility Selling

COLUMBUS, Ohio—Appliance dealers of Ohio are striving for the enactment of a state law which would prohibit electric and gas utility companies from merchandising of appliances.

Between 250 and 300 appliance dealers presented their case last Tuesday night before the Commerce and Transport Committee of the Ohio House of Representatives, urging passage of House Bill 435, according to Edmond LeFort, president of the Toledo Appliance Dealers Association.

And on Wednesday evening, April 13, utility companies will give their views before the same committee, after which the house group will vote whether to bring the bill onto the floor of the house.

Besides aiming at existing utilities, the proposed bill would also prevent cooperatives who might establish their own electrical and gas lines from selling appliances, LeFort said.

Appliance dealers are being supported in this move by hardware retailers and plumbers, the latter group being chiefly interested in curbing retail selling by gas utilities, it was indicated.

Dealers from many cities in Ohio came to the state capital for the hearing, and the Toledo dealer association chartered a bus to make the trip.

Many appliance dealers are also expected to be on hand next Wednesday to hear the utilities' presentation.

Newcomb Hits 'Discrimination' In Excise Tax

Smaller, General Levy
Would Permit Price Drop on
Appliances, Newcomb Says

CHICAGO—The 10% excise tax now applied to some electrical appliances is discriminatory and should be eliminated or reduced to 2% on a broadly distributed basis, according to T. J. Newcomb, sales manager of the Electric Appliance Div. of Westinghouse Electric Corp.

If this were done, he told the residential section of Edison Electric Institute during EET's 15th annual sales conference here, "it would knock \$25 to \$30 off a \$300 refrigerator or range tomorrow."

"It is a terrific handicap," he declared, "especially since the 10% tax on the manufacturer's selling price is far in excess of the manufacturing industry's net profit. In fact, it is probably double the 10-year pre-war average profit. . . .

"Yet, washing machines and vacuum cleaners go 'scot-free' in our industry. When you consider that hundreds of other household items are also exempt, then surely discrimination reigns supreme.

"Admittedly, taxation is necessary, but it seems grossly unfair" to have our products bear such an inequitable load when they are so much more essential to modern living than most

(Concluded on Page 33, Column 1)

G-E Puts 6-Cu.Ft. Unit In Low Price Bracket

BRIDGEPORT, Conn.—A 6-cu. ft. refrigerator designed to sell in the low-price field has been added to the General Electric line, L. H. Miller, manager of the company's household refrigerator division, has announced.

The new refrigerator, designated the NF-6F, carries a recommended national retail price of \$224.

A deluxe model of the 6-cu. ft. refrigerator that the company has been building primarily for the apartment-house field, the new unit is designed especially for use in small homes.

The refrigerator is equipped with

(Concluded on Page 4, Column 5)

Contractor Employees Union Election Is Postponed

LOS ANGELES—The election ordered by the National Labor Relations Board to determine what union, if any, will represent employees of refrigeration contractors in this area, has been postponed.

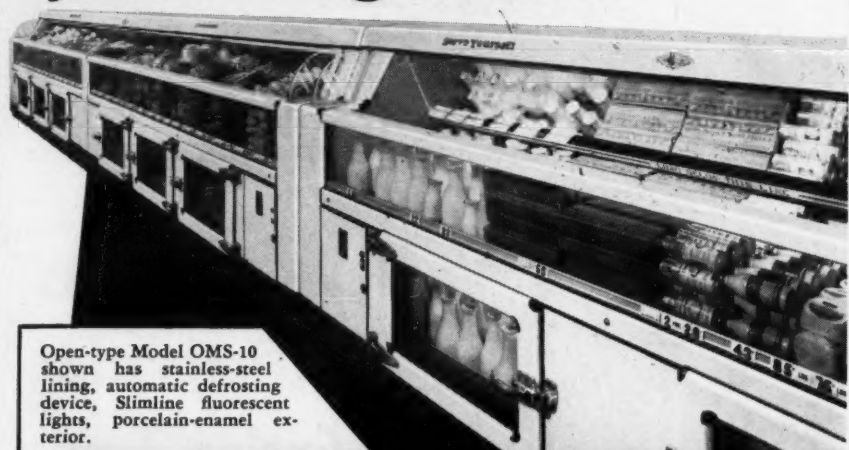
In an action taken March 25, the NLRB amended the Feb. 23 order directing the election by extending the time in which to hold the election from 30 days to "such time as the board shall in the future direct upon advice from the Regional Director that an election may appropriately be held."

(In its story on the election in the March 21 issue, AIR CONDITIONING & REFRIGERATION NEWS predicted that the election might be postponed, pointing out that unfair labor charges had been filed by rival union groups, and that the NLRB generally postponed representation elections when unfair labor practice charges have been filed and have not been disposed of prior to the date set for the election.)

The original order in the case of "Air Conditioning Co. of Southern

(Concluded on Page 4, Column 5)

it's more than just a refrigerator!



Open-type Model OMS-10 shown has stainless-steel lining, automatic defrosting device, Slimline fluorescent lights, porcelain-enamel exterior.

Sturdy... yes. Efficient? Superior insulation of sheet corkboard throughout and reliable performance of the refrigerating unit that is almost foolproof make the Warren OMS outstanding.

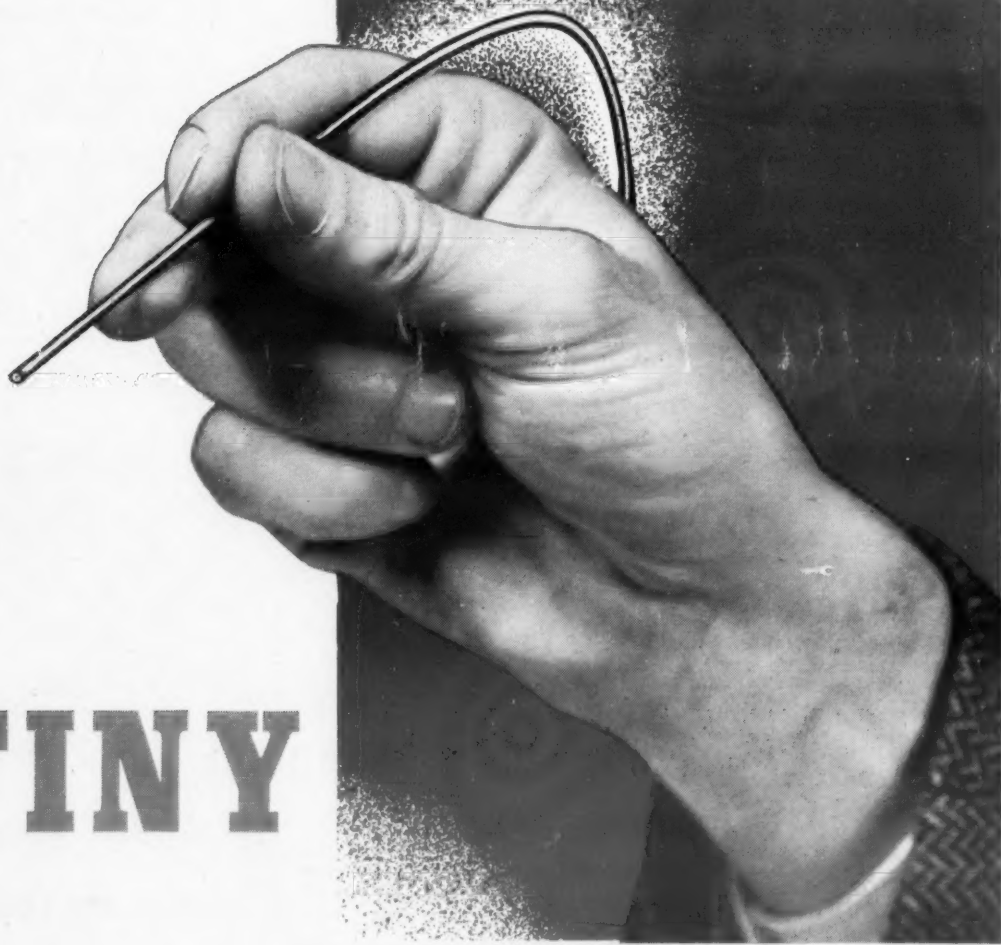
today's merchandiser Full-view, self-service type, its ultra modern smartness makes it today's outstanding meat and dairy-products merchandiser!

These are the things modern-day merchants want in a refrigerator.

We invite your inquiry about our franchise opportunities with this and other Warren units. Address Dept. 505.



The WARREN COMPANY INCORPORATED
905 MEMORIAL DRIVE, S. E. ATLANTA 1, GEORGIA



TINY

... but mighty important in a well made refrigerator

We mean the Wolverine Capillary Tube now identified as CAPILATOR. Despite its tiny size it is manufactured to very close tolerances ($\pm .001$)—a factor that is very important to manufacturers in the function of their products. You can always depend upon this tube being uniform in size and quality—two distinguishing characteristics of this tube.

Every inch of CAPILATOR is washed inside, tested for pressure drop and has both ends paper wrapped.

Specify CAPILATOR

WOLVERINE TUBE DIVISION
CALUMET AND HECLA CONSOLIDATED COPPER COMPANY
INCORPORATED

MANUFACTURERS OF SEAMLESS NON-FERROUS TUBING

1413 CENTRAL AVENUE

DETROIT 9, MICHIGAN

Crosley Corp. Names 5 to Posts In Sales, Advertising Depts.

CINCINNATI—Five new appointments to Crosley's sales and advertising organization have been announced by W. A. Blees, vice president and general sales manager, Crosley Div., Avco Mfg. Corp.

Tom Mason has been named manager of sales promotion, reporting to V. C. Havens, assistant general sales manager in charge of advertising, sales promotion, and public relations. Mason previously has been regional manager of Crosley's central region, with offices in Cincinnati.

Lloyd Dopkins has become manager of direct accounts with headquarters in Crosley's Radio City offices in New York City. His activities, Blees said, are to be nationwide in scope.

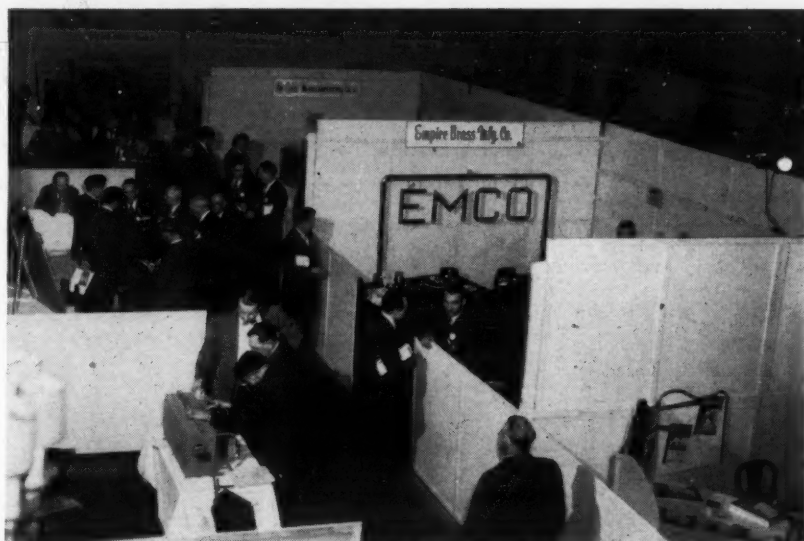
Prior to joining Crosley, Dopkins was vice president in charge of sales of Majestic Radio & Television Corp. He has been active in the radio industry since 1923.

H. E. McCullough has been transferred from the field sales organization to the Crosley advertising department to handle the advertising and promotion phases of the direct account activities.

H. R. Linebaugh has been transferred from Chicago, where he has been regional manager of the mid-west region, to Cincinnati, to succeed Mason as central regional manager.

H. F. Koether has joined Crosley to become regional manager of the mid-west region, with offices in Chicago.

Nearly 500 Attend Canadian RSES Educational Exhibits In Montreal



When the Interprovincial Association of the Refrigeration Service Engineers Society staged its tenth annual meeting in Montreal recently, 23 educational exhibits were set up under the sponsorship of the Canadian Refrigeration Manufacturers Association, patterned along the lines of similar exhibits held during the past year in the United States. Similar exhibits will probably feature annual meetings.



To officially open the exhibits Alderman Marcel Verville, representing Montreal's mayor, cuts the tape, with the assistance of E. G. McCracken (left), president of the Canadian RSES group, and C. Dowson, head of CRMA.



New officers elected by the Interprovincial group included A. J. Dottor, treasurer; A. E. Doan, first vice president; J. M. Turner, president; A. Laflamme, second vice president; R. G. Henderson, secretary; E. G. McCracken, chairman of the board (seated left to right), and L. J. Fournier, J. Thompson, and J. Roberts, directors; A. W. Brown, educational chairman; J. P. Delage, J. C. Dorval, and W. Podd, directors. Sgt.-At-Arms F. Chance was not present, along with several other directors.

Providence Health Dept. Rules Street Vendors Must Sell Pre-Packaged Items

PROVIDENCE, R. I.—Street vendors of ice cream and other foods will be permitted to vend only the pre-packaged variety here after June 1, the Providence health department announced recently.

This order by the department will ban the selling of ice cream cones on the street, according to Dr. Joseph Smith, superintendent of health.

Dr. Smith said the move was an extension of sanitary controls based on a city ordinance.

Dr. Edwin M. Knights, chief of sanitation, pointed out that street vendors have no way of meeting a city law which requires ice cream scoops to be immersed in running water when not in use.

Vendors will also be required to obtain a city license at \$10 and to provide covered receptacles in which to deposit the wrappings of the food they sell, he added.

Murphy Bros. Has Service Dept.

HAMILTON, Ont., Can.—Murphy Bros., 150 Main St. E., have opened a new radio and appliance service department.

Feb. Appliance Volume Trails Mark Set In Previous Periods

WASHINGTON, D. C.—Retail sales of independent household appliance dealers for February were 11% below the same month last year and 5% below January, the U. S. Bureau of Census reported recently. Sales for the first two months of the year were 12% below the same period last year.

Evansville ASRE To Hear How Fastenings Cut Costs

EVANSVILLE, Ind.—How proper use of fastenings can reduce assembly costs in the refrigeration industry will be described for the Evansville chapter of the American Society of Refrigerating Engineers on May 3 by George A. Tinnerman, vice president and general manager of Tinnerman Products, Inc., Cleveland.

Title of Tinnerman's talk is "Fastenings for the Refrigeration Industry." His own firm produces Speed Nut brand of fasteners. In his talk he will review the latest developments in modern fastenings and will describe new products designed primarily for the refrigeration industry.



PREVENT FREEZE-UP

in beverage and water coolers

WITH ALCO EVAPOTROL

... the "vest pocket"
evaporator pressure regulator
for ½ ton, nominal, "Freon-12"

Your freeze-up troubles are over when you equip beverage or water coolers with the ALCO Evapotrol... the simple, compact, lightweight control, precision-engineered for smaller installations.

It's excellent, too, for accurate control of a single evaporator in a multiple system... by maintaining constant evaporator pressure, regardless of fluctuations in suction pressure.

EXCLUSIVE FEATURES:

- ▶ 1. "Come apart" construction for cleaning and servicing.
- ▶ 2. Gauge connection.
- ▶ 3. Manual gauge shut-off valve built in.

• Bulletin 760 will bring you detailed data on Evapotrols with flare or solder connections. For larger regulators request Bulletin 183.



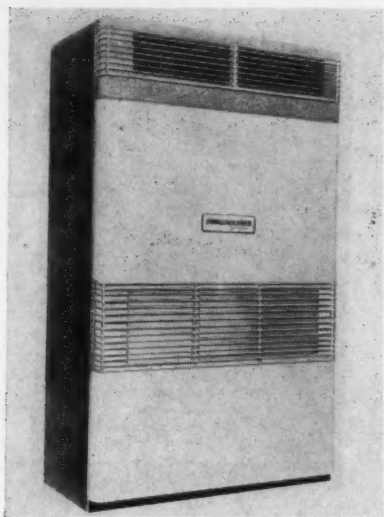
Designers and Manufacturers
of Thermostatic Expansion
Valves; Evaporator Pressure
Regulators; Solenoid Valves;
Float Valves; Float Switches.

ALCO VALVE CO.

853 KINGSLAND AVE. • ST. LOUIS 5, MO.

3740

Ajax Gears Air Cooler Distribution--



salesmen to deliver informative, fast-moving sales presentations. Salesmen are provided with order forms, load estimate forms, simple calculators for estimating the air conditioning requirements of a given space, and dramatic, graphic demonstrators.

Ajax offices and showrooms in the various territories are to have a definite "family" resemblance, Marks states. Interior color schemes, as well

LEFT: Ajax 'Storemaster.'

as exterior appurtenances, are to identify each distributor's establishment as part of the Ajax Corp. of America.

The corporation already has appointed distributors in many of the country's leading cities, Marks says. He emphasized that distributors act strictly as sales technicians, selling the Ajax air conditioning service. Local advertising also will follow the "service" theme and both national and local promotions will concentrate on the benefits of air conditioning to the public.

Ajax's Roommaster (for home and offices) comes in two models: the 1/2-ton unit with a capacity of 5,880 B.t.u. per hour; and the 3/4-ton model (8,870 B.t.u. per hour).

Both Roommaster models and the Storemaster (in 3, 5, and 7 1/2-ton units) are powered by Servel Supermetec condensing units. Roommaster direct-current models are now being developed, Marks revealed.

A principal feature of the Roommaster is that the unit can easily be removed from the cabinet. Aside



ABOVE: Ajax 'Roommaster.'

from its convenience for servicing, this ease of separating the cover from the unit itself makes possible the other Ajax major innovation of offering air conditioners in a variety of colors.

All units are shipped to distributors in standard color. Interchangeable decorative covers and matching installation materials, however, are available in pale green, powder blue, shell pink, and light ivory; and in three hand-grained wood finishes—dark mahogany, French walnut, and limed oak. Ajax thus makes claim to providing a room air conditioner which will blend harmoniously with the color scheme of the room.

Ajax is making available a financing plan to distributors, and is also offering to hotels, institutions, and large office setups a plan whereby they can get air conditioning at a monthly rental rate.

Installation of Ajax units can be made by the distributor's own service department, or by a local refrigeration engineer operating under contract to the distributor. If the distributor prefers to handle installation and service through his own organization, Ajax furnishes full instructions for installation and service of its various models.

Aided In 'Mutual Recognition' Agreement



Participating in the Miami, Fla. session which led to the recognition of NARC as sole industry bargaining agent and of the United Association as sole representative for the workers are the following: (standing, left to right): John J. McCartin, United Association; Warren W. Farr, NARC; Leo H. Green, United Association. (Seated, left to right): Robert F. Lynch, United Association; Martin P. Durkin, United Association; H. E. Wheeler, NARC; Harvey O. Miller, NARC; and R. W. Noll, NARC.

NARC, Pipefitters--

(Concluded from Page 1, Column 2) cago, chairman of the labor relations committee; H. E. Wheeler, Chicago; Warren W. Farr, Cleveland; and R. W. Noll, Los Angeles.

Signing for the United Association were Martin P. Durkin, Washington, D. C., general president; Leo H. Green, Pittsburgh; John J. McCartin, Chicago; and Robert F. Lynch, Jersey City, N. J.

Commenting on the resolution, Miller said he felt it would be helpful in clarifying relationships between the two organizations.

RESOLUTION

"WHEREAS, The National Association of Refrigeration Contractors is the established organization of contractors engaged in the handling, installing, repairing, and maintenance of refrigeration and air conditioning systems of all kinds; and

"WHEREAS, The United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada, A.F.L.—hereinafter referred to as the United Association—is the organization of craftsmen whose members handle, install, repair, and maintain refrigeration and air conditioning systems; and

"WHEREAS, The American Federation of Labor—guided by its official records of the work jurisdiction of the United Association—has established the United Association as the only trade union whose members possess the sole and exclusive right to perform all the work of the refrigeration and air conditioning industry; and

"WHEREAS, Representatives of these two organizations desire to cooperate to the end that the quality of workmanship obtainable by the public will be uniformly high;

"Therefore, be it resolved:

I

"That the National Association of Refrigeration Contractors hereby recognizes the United Association as the only trade union possessing the sole and exclusive right to perform the work of handling, installing, repairing, and maintaining refrigeration and air conditioning systems.

II

"That the United Association hereby recognizes the National Association of Refrigeration Contractors as the bona fide organization of contractors engaged in refrigeration and air conditioning work, and further recognizes their local chapters as bargaining agents for agreements affecting wages or working conditions in the refrigeration and air conditioning field in their respective areas.

III

"That in order to assure the highest uniform quality of refrigeration

and air conditioning to the public, the National Association of Refrigeration Contractors and the United Association agree to unite in providing a program of apprentice training which will continue to supply an adequate number of craftsmen fully equipped to assure the highest quality of workmanship to the consuming public.

IV

"That all local chapters of the National Association of Refrigeration Contractors and all local unions of the United Association jointly cooperate in this effort to procure the highest quality of refrigeration and air conditioning for the public by recognizing their mutual obligation as described above."

In Low Price Field



New G-E 6-Cu.Ft. Model--

(Concluded from Page 1, Column 5) a 3 1/4-in. deep meat storage drawer under the ice cube compartment and has a full-width, 5 1/4-in. deep drawer at the bottom of the cabinet for the storage of fruits and vegetables.

Shelf area totals 11.8 sq. ft., and there is room for the storage of as many as 10 square quart milk bottles.

The ice cube compartment holds about 17 lbs. of frozen food. It is equipped with two ice trays.

NLRB Postponement--

(Concluded from Page 1, Column 5) Calif. et al" called for elections to be held by employees of 31 firms who are members of the Refrigeration Contractors Association, Inc., and eight non-member employers.

Employees were to vote either for Refrigeration Fitters Protective Association, also known as Local 508; or the United Association of Journeymen & Apprentices of the Plumbing & Pipefitting Industry and its Local 250; or for neither.

THE COMPLETE LINE OF QUALITY VALVES and FITTINGS for refrigeration and air conditioning



R24



R10



R71



R73



R67

R119



R35



R131-HG



R42



R3

NR4



FOR YOUR NEEDS

LINE VALVES, packed and packless 2-way, 3-way, angle, globe

- ✓ MANIFOLDS
- ✓ RELIEF VALVES
- ✓ COMPRESSOR VALVES
- ✓ RECEIVER VALVES
- ✓ EVAPORATOR VALVES
- ✓ G-W CONTROL VALVES
- ✓ LIQUID INDICATORS
- ✓ REFRIGERANT CYLINDER VALVES
- ✓ CHARGING STANDS
- ✓ HERMETIC KITS
- ✓ TESTING OUTFITS
- ✓ SPECIAL PURPOSE VALVES
- ✓ FITTINGS, all types

KEROTEST MANUFACTURING CO.
2525 LIBERTY AVENUE
PITTSBURGH 22, PENNA.

KEROTEST

PERFORMANCE WITHOUT COMPROMISE

From internal engineering to external finish, every factor in Larkin refrigeration products is flawless in execution. The same constructive ability which originated patented Cross Fin Coils also produces Humi-Temp Forced Convection Units—Bare Tube and Zinc Fused Steel Plate Coils—Air Conditioning Units—Instantaneous Water Coolers—Evaporative Condensers—and other high-grade items demanded in the commercial and industrial refrigeration field.



LARKIN COILS 519 MEMORIAL DRIVE • S.E. ATLANTA • GEORGIA

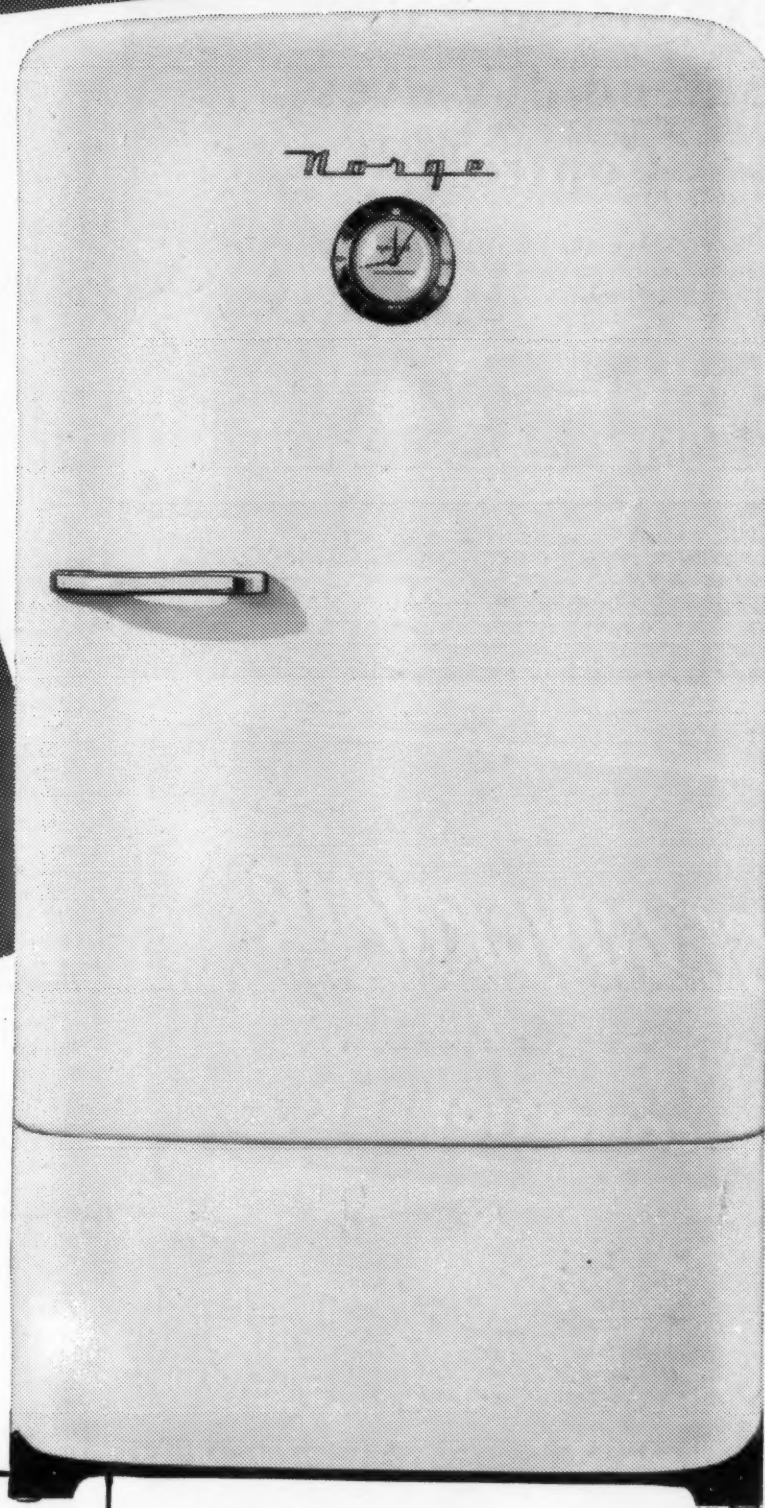


Now... The BIGGEST NEWS in the Refrigeration Industry!

SDF
at A NEW
LOW PRICE

Famous NORGE
Self-D-Froster
MOST WANTED FEATURE IN REFRIGERATION

Now as low as
\$269⁹⁵*



MODEL SR-849

Introduced by...

a Gigantic Nationwide Promotion Campaign for April

It's headline news! It's Norge's sensational Self-D-Froster—the only refrigerator with automatic defrosting system—at a new low price . . . and it's backed by a tremendous merchandising program!

Kick-off is a factory-paid *teaser* poster—thousands of them—to stimulate the curiosity of millions! Two weeks later the pay-off poster transfers this interest into *action* . . . impels readers to visit Norge retail outlets!

Posters, plus dynamic national magazine ads, are important parts of the program . . .

but *best of all* are 15 hard-selling promotion items in each dealer's *complete* S-D-F Merchandising Kit. Complete with local newspaper ads . . . window streamers . . . radio spots . . . national ad reproductions . . . eye-catching displays . . . mailing pieces . . . *everything*, in fact, a dealer needs to set new S-D-F sales records!

This top-profit opportunity is another example of Norge's continuous policy of backing up dealers with what it takes to make sales in any market. Join this sensational S-D-F sales drive now!

USE THESE Dealer Aids!

1. Dealer Plan Book
2. Hard-selling Newspaper Ads
3. Eye-catching Displays
4. Compelling Window Streamers
5. Merchandise Cards
6. Giant Post Card Mailers
7. Colorful Product Brochure
8. Customer Letter Series
9. Complete Product Literature
10. Radio Spots
11. S-D-F Poster Paper
12. Car Cards
13. Truck Cards
14. National Ad Reproductions



**BIG
DOLLAR**

Value IN HOME APPLIANCES

*Other Norge Refrigerators from \$219.95

BORG-WARNER QUALITY PRODUCTS

REFRIGERATORS • ELECTRIC RANGES • GAS RANGES • ELECTRIC WATER HEATERS
HOME FREEZERS • HOME HEATERS • WATER COOLERS • HOME LAUNDRY EQUIPMENT

Norge Division, Borg-Warner Corporation

Detroit 26, Michigan

In Canada: Addison Industries, Ltd., Toronto, Ontario

SEE
NORGE
BEFORE YOU BUY

see your **"DETROIT"**

WHOLESALE

for

Expansion Valves
Solenoid Valves
Controls

"DETROIT"

2810

DETROIT LUBRICATOR COMPANY General Offices: 5900 TRUMBULL AVENUE
DETROIT 8, MICHIGAN

Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION
Canadian Representatives: RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG

"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Float Valves and Oil Burner Accessories
"Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators
EXPORT DEPARTMENT—Box 218, Ridgefield, New Jersey



PAT NO. 2, 297,928

A Complete Unit for a Complete job

You're always sure you're getting the very best in efficient, economical packaged air conditioning when you specify Governair—the original patented design!

This complete unit is easy to install—requires only simple electrical, water and duct connections. Built-in Evaporative Condenser keeps water usage down to a minimum. Governair engineering assures correct co-ordination and balance of all functions. Generously proportioned heat transfer surfaces provide maximum performance and economy.

Choose Governair completely packaged air conditioners and you'll always do your best!



AIR CONDITIONER



EVAPORATIVE CONDENSER



UNIT COOLER



BLAST COILS FOR HEATING & COOLING

GOVERNNAIR

High Velocity Air Distribution Systems Find Favor When Space for Equipment Is Limited

By C. Dale Mericle

DETROIT—"High velocity air distribution systems are coming into their own now for air conditioning, there's no doubt about it. With rentals in office buildings running so high per square foot, the amount of space devoted to air conditioning ductwork and machinery has to be limited. And when installing air conditioning in old buildings it is usually easier to cut through for smaller ducts.

"This also means that the standard 20° temperature difference used in air conditioning is changing to 30° and 40° t.d.," declared V. M. Lathers of the Barber-Colman Co., who discussed "Controls and Air Distribution in Air Conditioning Systems" before the Detroit Section, American Society of Refrigerating Engineers.

Speaking in what he called "pipe-fitters' language, because that's how I first started in this business right after World War I," Lathers succinctly outlined the various problems involved and presented some suggested solutions.

In showing, by means of slides, various standard control methods, Lathers emphasized that "dampers with opposed blades permit control right down to a gnat's eyebrow.

"The average damper gives you very little volume control in actual practice," he asserted. "The full volume can be forced through such a damper in half-open position with little trouble. Opposed blades, however, let a damper give full modulation.

"Air conditioning coils are accurately figured on the basis of entering air temperature, and properly designed dampers and controls should be used to achieve that desired temperature.

"But," he pointed out, "it's just as bad to undercontrol a job as to overcontrol it."

Double Ducts Mix Hot, Cold Air

Described by Lathers as "the finest thing" yet developed in air delivery and control system is the "double-duct" arrangement whereby the main supply to the conditioned space consists of a duct divided in two longitudinally with one half supplying cold air, the other, warm air.

Through dampers a thermostat modulates the proportion of cool air to warm air so that air at any desired temperature can be delivered from this supply duct to the individual spaces. This would be especially useful in offices, he indicated, where the occupant at one office might want an 80° F. room while his next-door neighbor preferred 70° F.

Setting the thermostats in each office to the desired temperature would regulate the proportion of cold to warm air taken off the main double-duct supply.

Going to the other extreme of simplicity, Lathers also described a practical formula which a contractor could use in engineering an installation in a long, narrow room, such as a shoe store.

How To Figure Long, Narrow Store

"As you all well know," he said, "you'll get the proprietor of a store to agree on air conditioning the place and then he'll tell you that you can have 2 sq. ft. at the back of the store for your equipment. He'll want you to throw the air from the back of the room all the way up to the front and still have a perfect job.

"In most cases this is impossible, and you can prove it to him quickly by using this simple formula:

$$W = \frac{QV}{.8H \times 10^4}$$

where

REFRIGERATION & AIR CONDITIONING
UNITS • PARTS • TOOLS • SUPPLIES

AIRO mail service is
prompt—dependable.

Saves you valuable
time lost in pick-ups.

Write for catalog on your letterhead.

AIRO SUPPLY CO.

2732 N. ASHLAND AVE., CHICAGO 14, ILL.

W = the minimum room width
permissible.

Q = c.f.m. of air delivered.

V = face velocity.

H = room height.

"In practically all such cases the figure for W will be much wider than the width of the store so the job obviously won't work. Then you can sell him on the necessary idea of running ductwork for additional outlets."

Return Ducts Better Too Big Than Too Small

Returns are also most important in air conditioning, Lathers emphasized.

"These returns must be properly sized, but often they are not made big enough. It is better to make them too big and then put in dampers to cut down their volume than to make them too small in the beginning."

In commenting on air outlets Lathers declared that setting of the outlet vanes must be considered carefully.

"Deflection of the air by these vanes up to an angle of 30° doesn't really affect pressure drop, but deflection up to 60° angles will increase pressure drop by as much as nine times."

Another factor that should be considered is the "aspect" ratio, that is, the ratio of width to height of the face of the supply grille.

"With the longer, narrow grille there is much more mixing action between the room air and the incoming air than with the square grille of the same face area. For the average job grilles with an aspect ratio of 5 to 1 will probably be satisfactory."

Much of this discussion was illustrated with slides showing smoke tests conducted in the Barber-Colman laboratories, during which the point of locating return air grilles was brought up.

"On straight cooling jobs it is okay to put the return on the same wall under the supply outlet where necessary. This is no good for heating, however," Lathers commented.

Rating Grilles for Noise Level

Noise level, too, is highly important in air conditioning, he said, illustrating with some catalog data of his company showing the relation of various types grilles to such factors as size, air delivery, and noise.

"Generally," he declared, "if you select a grille rated at 5 decibels less than the room noise level you won't add to the noise level already present in the room.

"As for the basic definition of a decibel, it could be described as the slightest change in sound noticed by the human ear, or as a college professor once defined it, the amount of noise made by one female mosquito in heat."

The old problem of making an improperly designed (or installed) air conditioning system work by "speeding up the fan" was touched upon by Lathers. Simply speeding up the fan to get air into the end

room on a long run, say, is not the answer, he indicated.

Turning Vanes Speed Circulation

A surprising increase in air delivery throughout a system can be achieved by the proper use of turning vanes, he declared.

"With turning vanes you can get three times as much air through a duct."

Lathers also cited wartime experiments on tanks, early models of which did not provide enough ventilation for the motor or the crew, he said. Air circulation in these tanks was increased 100% by the installation of turning vanes in the air intakes, he revealed.

Likewise, grilles should not be installed in the side of a supply duct without putting deflecting devices behind them to direct the proper amount of air out through the grilles.

As for ceiling outlets, Lathers commented, "I think all ceiling outlets do an excellent job of introducing air into a room," but like everything else, they must be properly installed.

In this connection Lathers said that "the old cry of needing 'bumper' changes on the end of ducts is the boloney. By the use of vanes directly above the ceiling outlet, the duct can be cut off at an angle just beyond the outlet and you save all that material used in the 'bumper.'"

With combination supply and return ceiling units, the speaker cautioned against permitting a heavy pressure loss.

"You need plenty of fan power at the other end of the plenum space to get that return air out of there."

Booklet Tells Results Of U. S. Tests on Radiant, Jacketed Space Heaters

WASHINGTON, D. C.—Results of tests made by the National Bureau of Standards on the heating characteristics of space heaters using a four-room test bungalow enclosed in an insulated shell to simulate different climates have been published recently, the bureau has announced.

The bureau's investigation was conducted as a means of establishing the magnitude of temperature differences that exist in a typical house warmed by different kinds of space heaters and to provide a basis for selection of reasonable limits to dwelling size, heat loss, and temperature variation.

Tests were made in the experimental bungalow to show the effect on interior temperatures of such factors as heater location, size and type of jackets, open transoms over interior doorways, unattached fans, and underfloor plenums.

Called "Temperatures in a Test Bungalow with Some Radiant and Jacketed Space Heaters," the booklet contains 44 pages, 88 tables, and 24 illustrations. It is priced at 25 cents per copy and is obtainable by writing the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

new RAPID DUZ-ALL

CARBONIC GAS

SERVICE CYLINDER



• Ideal for many purposes, this new dependable, durable Duz-All unit is completely equipped with fire-horn, connecting hose, tire adapter, flare adapter and standard CO2 charging connection for easy refilling. Safe, economical. 5 lb. CO2 capacity. ICC-3AA-1800 Cylinder.

Use Rapid Duz-All for:

- 1—PRESSURE-TESTING LINES
- 2—BLOWING OUT COILS AND CONDENSERS
- 3—INFLATING TIRES
- 4—EXTINGUISHING FIRES

Fine SEE YOUR WHOLESALE
PRODUCTS CO.

185 NORTH WABASH AVENUE • CHICAGO 1, ILLINOIS

5 New Vice Presidents Named In Redmond Co. Expansion Move

OWOSSO, Mich.—Appointment of five new vice presidents and a new treasurer of Redmond Co., Inc., has been announced by Frank C. Campbell, president. The new officers and their positions are:



James Tweedy, vice president in charge of production in Owosso; **Paul Maurer**, vice president in charge of engineering; **Wilfred R. Fox**, vice president in charge of marketing research and advertising; and **W. Walter Young**, comptroller, treasurer.

The new officers were announced as part of the program of expanded operations. They are in addition to the company's executive vice president, **Lewis Hamlin**, and Vice President **Glenn Baumhardt**, who is the liaison between the engineering and sales departments.

Tweedy was formerly with Chrysler and General Motors. With the Redmond sales organization since 1943, he became western area manager in 1945, and then was manager of induction motor sales from 1947 until his latest advancement.

Best has been with the company since 1939, and is known throughout the automotive industry as an authority on low-voltage direct-current electric motors.

Kennedy has been with Redmond since 1944, having held the posts of manager of production planning, superintendent of manufacturing, and production manager. Prior to 1944 he held positions with General Motors of Canada and Chrysler Corp. in Detroit.

Maurer was advanced from director of engineering. He became executive engineer of Redmond in 1943 was later transferred to the National Pneumatic Co., an affiliated concern at Rahway, N. J., where he was manager of the industrial division and later chief engineer of both industrial and transportation divisions.

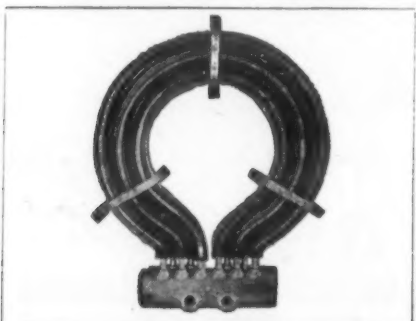
He returned to Redmond in 1948 as director of engineering. Previous to joining the Redmond organization, Maurer was with Hudson Motor Car Co. and Bendix Aviation Corp.

Fox, formerly with Buick Motor Div. of General Motors, joined Redmond as advertising manager in 1944. For two years he served concurrently as advertising manager of National Pneumatic.

In addition to his appointment to vice president of Redmond, he was recently named manager of advertising and marketing research for Holtzer-Cabot, Inc., an affiliated manufacturer of electric motors and telephone equipment in Boston.

Young, who previously held the position of comptroller, is a director of the Saginaw Valley Chapter of the National Association of Cost Accountants. He formerly was with S. D. Leidesdorf & Co., New York City, later was vice president and treasurer of RCA Victor Distributing Corp. of Chicago, and then was with Harry B. Culley & Co.

ROME-CONDENSER ★ Jointless Type ★



Rome Water Cooled Condenser Coils insure trouble-free condensing equipment. Used by leading compressor manufacturers.

ROME-TURNEY RADIATOR COMPANY
222 CANAL ST.
ROME, N. Y.

Give Trade-Ins Away?

Dealer Finds Donating Used Refrigerators To Charity Group Can Be Boon to Business

DENVER—Instead of putting trade-in refrigerators, ranges, or washing machines through expensive reconditioning processes, or attempting to sell them "as is," K. W. Friend, head of Friend's Appliance Co. here, donates all trade-ins to the local Goodwill Industries, a charitable organization.

"Naturally it might be possible to extract a few dollars profit through reconditioning and reselling trade-ins," Friend indicated.

"However, we consider this an operation which requires a lot of space, time, and detracts considerably from the prestige of the store from a new-appliance standpoint. Therefore, we are simply giving all trade-in appliances away as fast as they are received."

Friend just recently started donating trade-ins to the Goodwill Industries, an association which operates four "used merchandise" stores, for the benefit of underprivileged families throughout Denver.

Mechanics of the Goodwill organization clean up old refrigerators, washing machines, and other appliances and place them in tip-top operating condition to be sold for the cost of the work to many families who otherwise could not afford appliances of any kind, according to Friend.

In the interim Friend's is making the same allowances on trade-ins as at any time in the past, but considers each a "total loss" from a profit standpoint. However, the store's humanitarian service in disposing of all trade-ins in this way, has won it much goodwill and appreciation, Friend's experience has shown.

Rigid Terms Favored by Dealers In IEEDA Poll

SPOKANE, Wash.—The 5-Minute Poll taken in February by the Inland Empire Electrical Dealers Association revealed that 73% of those replying opposed relaxation of Regulation W and 87% thought more electrical goods should be fair-traded.

Reporting results of the poll, the association noted that most replies were returned before the recent changes in Regulation W were announced.

The poll showed that only 10% of participants favored a reduction in down payments, with 88% voting "no" and 2% undecided on this point. Only 32% wanted an extension of the time to pay balances.

Ninety per cent voted against permitting home trials of longer than 10 days and 73% against allowing rental of appliances with payments to apply on purchase price if purchased.

Other questions dealt with television and radio. In answer to one of these, "Do you have a radio service department?" 59% said "yes"

Distributors In Buffalo Plan Joint Exhibit April 30-May 7

BUFFALO—Several distributors of electrical appliances have reserved a section of the exhibition floor for the showing of their products at the Buffalo Better Homes Exposition to be held April 30 to May 7 at the Masten Ave. Armory.

The area taken by the Electric Living Industry, as the distributors will be known collectively, totals 3,000 sq. ft. and represents one of the largest sales of space ever made in a Buffalo exhibition.

With special staging and decorations, the display will be called the Electric Way and will demonstrate the comfort and convenience which electrical household appliances have brought to modern living.

Barnes Opens Appliance Shop

EAU CLAIRE, Wis.—An electrical appliance shop has been opened at 224 N. Dewey St. here by Barnes Sales & Service, which formerly sold and serviced refrigeration and air conditioning units at the wholesale level.

Frigidaire's Magazine Advertisements Are Frigidaire Dealer Ads

Look how Frigidaire focuses reader attention on the Frigidaire Dealer. Just follow the arrows.

1. Right at the top of each ad the reader is invited to "Ask your Frigidaire Dealer" for the answer to the question in the headline.

2. Then the Dealer is shown demon-

strating the product advantage named in the headline.

3. A big close-up of the Dealer and the prospect in the showroom always commands attention.

4. Frequent references to the Frigidaire Dealer direct readers to his store—tell how to find him.

5. Feature illustrations also help build reader confidence in the Dealer's ability and integrity.

All this for Frigidaire Dealers, in addition to the largest magazine campaign in Frigidaire history . . . with 20% more advertisements, and 46% more circulation than last year.

Want room for 70 lbs. of frozen food in your new refrigerator?

Ask your Frigidaire Dealer to show it to you in America's No. 1 Refrigerator—the one that's different from all others!

FRIGIDAIRE Refrigerators

Simplest cold-making mechanism! The one-and-only Frigidaire Motor-Mixer works without belts or gears, without attention from you. No wonder it's so dependable, so wonderfully easy on precious electric current.

Here's 75¢ of a bushel of fruits and vegetables in the Frigidaire Hydrator. Glass-topped for full visibility, the Hydrator keeps these foods crisp, fresh. It rolls out smoothly, effortlessly at a finger touch.

Ice Cubes pop out when you push an easy-to-use lever—no fuss, no fuss. This fast, handy service is yours with Frigidaire's exclusive Quick-Ice Trays.

Depend on FRIGIDAIRE to do things right!

These Ideas Have Worked



E. A. Prince (upper left) inspects visible freezer prospect file, (upper right) points to wrapping materials panel, and (below) gives away some frozen food.



No 'Hot' or 'Cold' Season In Paoli

Dealer's Continuous School on Home Freezing, Steady Promotion Sells 300 Freezers A Year

PAOLI, Pa.—“We have been selling freezers since 1939,” says E. A. Prince, sales manager, Wm. H. Murray Inc., “and have developed a consistent sales campaign that sells over 300 freezers a year for us. We don't have a hot or cold season at any time, but keep merchandising throughout the entire year.”

Prince pointed out that every one of the dealership's seven outside salesmen owns and uses a home freezer. He feels that in order for them to be able to do a good selling job, they must know its good points and values.

“Salesmen are of course schooled in freezer benefits,” said Prince, “but all the schooling can't compare to salesmen actually having freezers in their own homes to know what their wives have to contend with, their benefits, space they occupy and other values.”

“For this reason, we feel that it is essential that any salesman selling freezers, first own one himself.”

Part of the freezer merchandising job is an educational one, and Prince feels that a large share of this belongs to the dealer. Many people, he contends, still don't know what a home freezer will do.

For this reason he has a continuous freezer school in operation for prospects which is held in cooperation with his distributor.

Prospects receive mailed invitations to these classes and learn the value of freezers by watching the best methods for preparing, wrapping, and freezing foods. As a further inducement to attendance, door prizes, usually consisting of frozen food bundles, are awarded.

“We explain to prospects that canning is a much harder job than freezing,” points out Prince, “especially in strawberry and corn season.”

“We are prepared to point out that frozen foods are not only easier to prepare, but are also garden fresh when you want them. In this case, we show how freezing vs. canning puts freezing on a higher level.”

Because of these classes, prospects are better able to understand the points brought out by salesmen that visit them, Prince contends. Prince keeps a freezer in operation near the doorway of the store.

“We keep a supply of lobster, fish, cakes, and rolls in it,” says Prince, “and as we escort a prospect to the doorway, we stop by the freezer and give her a package. ‘Take home a sample,’ we tell her and ‘see how good your own frozen foods can be.’”

Another business-builder is a simple plywood panel hung conspicuously over a mass display of several brands of freezers. Large letters reading “Get The Most Out Of Your Home Freezer,” are painted on it. Attached

to this panel is an assortment of freezing, wrapping materials, and accessories.

“We set up this display,” explains Prince, “as a means of attracting people who are renting food lockers from commercial concerns. They come here to buy cellophane wrapping paper, large freezer vegetable bags, liquid containers, and other items.”

“One of our salesmen takes the order from the customer and gives an order slip to a stock boy. Then our salesmen begins to talk about the advantages of owning a freezer to the customer while they wait for the stock boy. Many sales results from this as well as future prospects.”

The salesmen take turns inside and outside the store. Outside work is primarily confined to following up leads acquired in the store. Their sales records are high, due in part to the fact that Paoli, about 20 miles west of Philadelphia, is an area of farms and suburban dwellers with gardens who are natural freezer prospects.

They work on a salary and commission basis with the added incentive of a bonus on special quotas. Prince has set up a monthly sales contest system which gives credit for quotas and points.

Slow moving merchandise, such as electrical heating appliances in the summer, brings the salesmen more points than an item of similar cost but in greater seasonal demand. Points on freezers rise as the temperature drops.

Salesmen make out a daily sales report and sales prospect report forms every day. Each salesman keeps a record of all sales, names and addresses, both inside and outside the store on the first form.

On the second, he lists the prospect's name, address, phone number, and item in which interest was shown. The prospect report is turned into the office and later assigned as a lead to a salesman, not necessarily the one who originally made the contact.

Whether he gets the assignment or not, the salesman who gets the lead also receives commission on any eventual sale.

“We have to coordinate our efforts if we are to reach and maintain the sales volume necessary to successful operation,” says Prince. “We have a large staff to maintain, including 25 service employees. We sell commercial refrigeration and air conditioning as well as freezers.”



DEALERS... DEALERS... DEALERS



It will pay you to look into the Wilson line for '49, particularly the FF-30 sectional model. Here is a freezer constructed so that additional sections can be added to the original unit. Gives users additional freezer capacity at low cost. Sectional construction makes installation easier when space is limited. Sell the first unit . . . additional units will sell themselves.

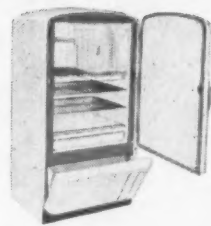
Wilson helps you make sales with a national merchandising and advertising program, in the following publications:

Country Gentleman • Poultry Tribune • Hoard's Dairyman
Farm Quarterly • Ice Cream Review

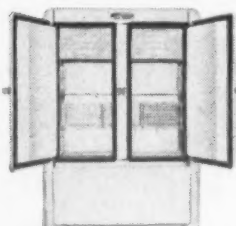
Some valuable franchises still available.

Write or wire Dept. 4-AC

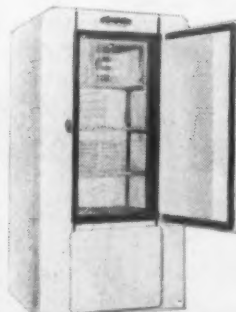
REFRIGERATORS AND FREEZERS



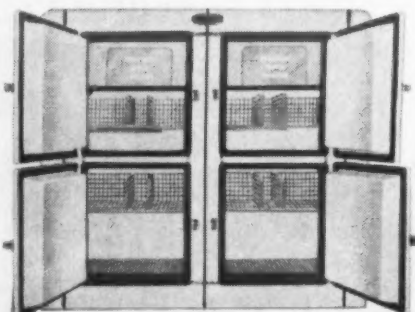
New Household Refrigerator Model S-10A



Self-Contained Freezer Model FF-25

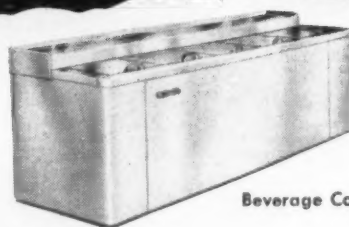


Self-Contained Freezer Model FF-15

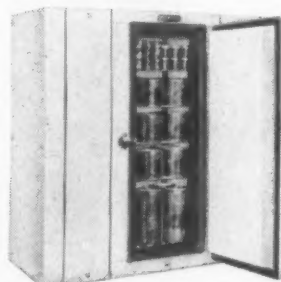


Sectional Freezer Model FF-60

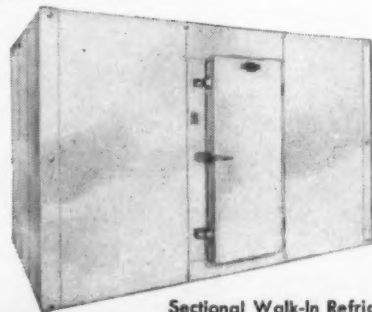
COMMERCIAL REFRIGERATION



Beverage Cooler



Ice Cream and Frozen Food Sectional Storage Cabinet Model FI-62

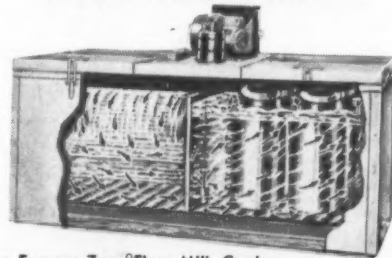


Sectional Walk-In Refrigerator

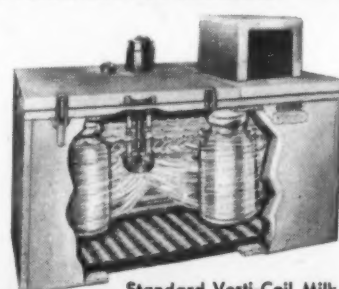
FARM MILK COOLERS



New Front-Opening Milk Cooler



The Famous Zero Flow Milk Cooler



Standard Verti-Coil Milk Cooler

Barlow & Seelig Reports Largest Profits, Sales

RIPON, Wis.—Largest output, sales, and profits in the 40-year history of the Barlow & Seelig Mfg. Co. here were reported for 1948 by H. A. Bumby, president.

Net profit, after taxes, amounted to \$1,643,154. In 1947, net profit, after taxes, was \$1,211,695.



SECTIONAL HARDENING FREEZING and STORAGE ROOMS

CAPACITIES FROM 300-5,400 GALS. RECO-FAB Hardening and Freezing Rooms are shipped complete with all required refrigerating equipment and complete assembly instructions. All equipment bears our standard one year Manufacturer's Warranty.

SIMPLE TO ERECT, MOVE OR ENLARGE

RECO PRODUCTS DIVISION
2020 Naudain Street, Phila. 46, Pa.

WILSON REFRIGERATION, INC.

DIVISION OF WILSON CABINET CO., INC.

SMYRNA, DELAWARE

FARM MILK COOLERS AND FREEZERS • COMMERCIAL REFRIGERATION

Salt Lake Dealers Fight Utility Ban on New Gas Appliance Installations

SALT LAKE CITY—Because there is not an ample supply of gas coming into Salt Lake City to take care of new installations, according to the Mountain States Fuel Co., the gas utility is asking the Public Services Commission to make permanent a temporary ban on new installations of gas appliances and heating equipment in new homes here.

At the same time, a group of gas appliance dealers have banded together to fight the utility's action and to carry the matter to the state supreme court if necessary.

The dealers contend that they will be forced into bankruptcy if the ban continues and that the utility had "never given us any indication at any time that there would be a shortage of gas."

According to Clifford Ashton, attorney for the dealers, the dealers have on hand more than \$1,000,000 worth of gas appliances "which would be practically unsalable if this ban is continued."

A. Ray Curtis, one of the dealers, stated "our only salvation would be to salvage some part of these inventories at staggering losses to us—or get the manufacturers of the merchandise to take it back at a discount."

Barker To Manage Service At McCray Refrigerator

KENDALLVILLE, Ind. — Appointment of James E. Barker as manager of the service department of the McCray Refrigerator Co. has been announced by the company.



For the past 5 1/4 years Barker was associated with the Universal Cooler Div. of International Detrola Corp. in various capacities, his most recent assignment with them having been that of application engineer. His formal training was at Purdue university where he graduated in 1939 with a bachelor of science degree in mechanical engineering.

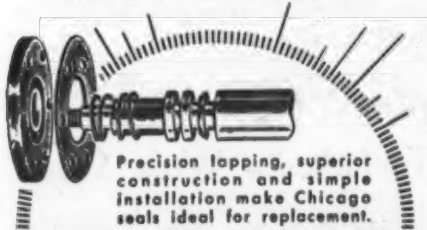
Landers, Frary & Clark Net Profit Reaches \$2,069,763

NEW BRITAIN, Conn. — A net profit before taxes of \$2,069,763 for the year 1948 was reported recently by Landers, Frary & Clark here. This compared with a net profit of \$1,909,542 in 1947.

Net income from operations in 1948 after provision for Federal income taxes, etc., was \$1,160,575, or \$2.75 per share.

PLAYSAFE

USE
CHICAGO SEALS
and
VALVE PLATES



Only Chicago valve plates have replaceable seats.



PERFECT BALANCE



CHICAGO SEAL CO.
312 S. MOYNE AVE. CHICAGO 28, ILL.

Visible Thermometers

Placed In Self-Serve Produce Cases, They Emphasize Refrigeration's Role In Preventing Spoilage

WASHINGTON, D. C.—A simple innovation which has gone a long way toward "converting" many housewives to making regular use of self-service meat buying methods, is the installation of a row of thermometers in self-serve cases at the new Giant Supermarket at Second and Kennedy, N. W. here.

The thermometers are used in both refrigerated produce cases, and self-service meat cases. In the refrigerated produce area, there are three 12-ft. Hill self-service units, for lettuce, celery, broccoli, carrots, cabbage, tomatoes, and other perishables.

In the center of each case is a small circular thermometer, 2 in. across, which is connected by conduit to "feelers" through the bottom of

the self-service case. On its face, the thermometer shows a "green section" representing a spread of degrees through which proper refrigeration is being applied and a "red section" for overly-warm temperatures.

Salespeople in the market point out to customers that if the thermometer needle is anywhere in the green section, the vegetables are fully protected against spoilage or loss of flavor. Not since the installation of the new refrigerators has any needle gone into the red section, according to the market management.

Another innovation in the new Hill cases is the installation of an all-glass front panel, through which all produce, as well as the thermometers can be seen from a distance.

Strong Drawing Power of Appliance Displays Seen In 'Home Show' Survey

ST. LOUIS—A comprehensive audience survey made during the nine days of the third annual Home Show of St. Louis staged at Kiel Auditorium in mid-February, revealed that kitchen appliances and equipment ranked first in interest.

The audience survey was made by the Edward G. Doody Co., market research firm here.

According to the firm's statistics, 25.9% of the persons answering the survey found the exhibits of kitchen appliances and equipment had the greatest appeal.

Kitchen exhibits ranked second with 8.3%, room displays 7.7%, radio and television 6.7%, and building materials 6.4%.

The visitors ranked kitchen and appliance displays second to utility displays in appearance.

Stagg Is Asst. to President Of Eureka Williams Division

BLOOMINGTON, Ill.—M. V. Stagg, formerly assistant to the vice president in charge of the Williams Oil-O-Matic Div., Eureka Williams Corp., has become assistant to the president in the division.

Stagg joined the Williams Oil-O-Matic Heating Corp. on May 1, 1934 as manager of the company's Ice-O-Matic division. When the company discontinued the manufacture of refrigeration equipment, during the war years, Stagg assumed expanded duties.

Naxon Utilities Corp. Cuts Prices on 2 Portable Washers

CHICAGO—Naxon Utilities Corp. has announced price reductions on two of its three portable washers. The model KH was reduced from \$47.50 to \$39.95 and the model FM from \$49.50 to \$44.95.

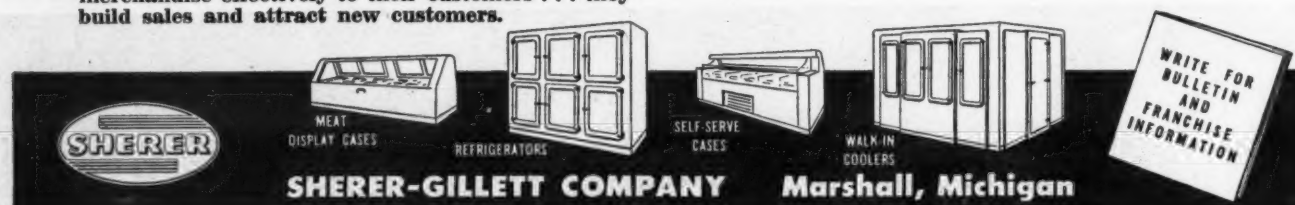
KELVINATOR WATER COOLERS
Town and Lucas Streets, Columbus 8, Ohio



60 MODELS and TRADITIONAL SHERER QUALITY—BUILD A BETTER DEALER BUSINESS

Sherer Model 2508M is another outstanding example of the design advantages that spell out E-X-T-R-A S-A-L-E-S and are found in all 60 Sherer models. Sherer keeps ahead by anticipating the needs of users and creating models to fit them most advantageously. Sherer Refrigerators are attractive to food market operators and display merchandise effectively to their customers... they build sales and attract new customers.

You'll find Sherer Refrigerators easier to sell because of their top performance record everywhere... a record that earns the title of "Leadership Line." You, too, can keep ahead with the Line that's more profitable to sell because it leads in styling, quality, economy... as well as in sales-building for the retailer.



THE MASTER SERVICE MANUALS - - -

— — — and other books of the Refrigeration Library are depended upon as textbooks in trade schools from coast to coast.

BUSINESS NEWS PUBLISHING CO., DETROIT

The Fine '49 ESCO Line

"BUILT LIKE A BATTLESHIP"

ESCO Products have enjoyed the reputation of sturdy "BattleShip" construction for more than 20 years. This built-in quality makes the ESCO Line easier to sell.

Farm and Home Freezer Line

Models from 10 to 40 cubic feet. A size for every prospect. Smart styling... Rugged construction... Tops in efficiency... Built-in Signal and Fast Freeze Fan—PLUS

5 Year Food Warranty
5 Year Protection Plan

Milk Cooler Lines

The amazing Model "AD" ESCO "NIAGARA" Line with its smooth "Icy-Wall" interior and exclusive patented Automatic "Neck-High" Water Leveler... the finest Milk Cooler made.

The exclusive Model "VD" ESCO "Icy-Wall" Line with its perfectly smooth "Icy-Wall" liner and controlled ice bank... no competition in this Line.

The standard Model "V" ESCO Line meets any competition... noted for its durable "BattleShip" construction.

ESCO DeLuxe Beverage Coolers

ESCO Beverage Coolers provide dry storage with efficient controlled forced air cooling. Real business-builders for clubs, cafes, restaurants... convenient slide-away lids, bar-height top.

ESCO Ice Makers

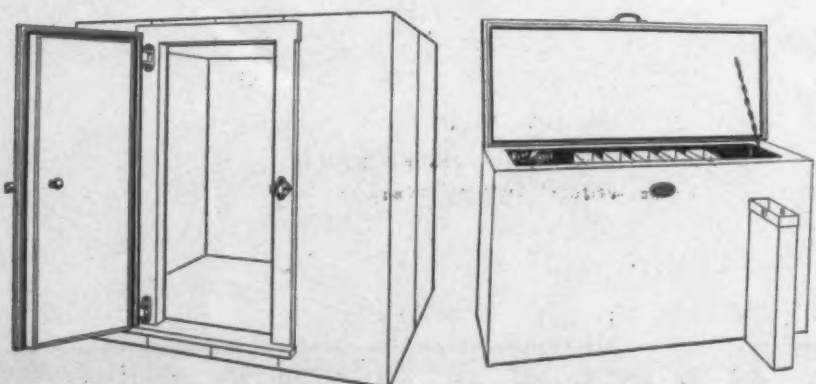
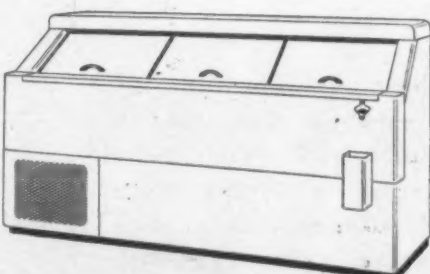
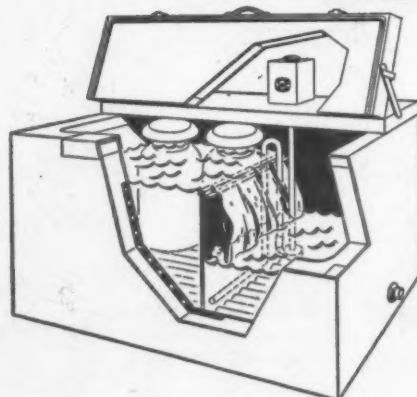
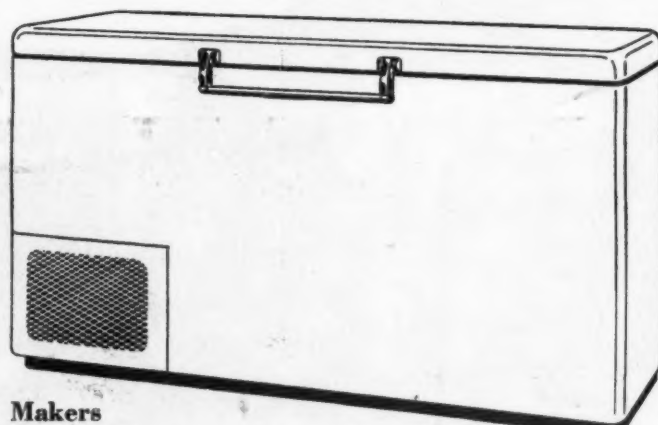
The ESCO Ice Maker Line (75 to 2000 lbs. daily) provides capacities to meet the needs of hotels, hospitals, country clubs, and restaurants of all sizes.

ESCO Sectional Cold Rooms

Three standard Models (or to order for special sizes) provide the answer for the growing demand for easy-to-install, walk-in, cold storage facilities. Standard panel sections permit later expansion and provide flexibility.

5-Year Protection Plan

All ESCO Equipment packaged complete with Sealed Units carry a 5-year Protection Plan.



Esco Cabinet Company

West Chester, Penna.

Dealers and Distributors are invited to write for detailed information and specifications on the PROFIT-MAKING ESCO LINES

Bastian-Blessing Names Eastern Distributor



Officials of both companies discuss the recent agreement that makes Ziskend Co. New England distributor for Bastian-Blessing. They are (left to right): Carl Schleck, assistant treasurer and assistant secretary of Bastian-Blessing; Harry Ziskend, president and treasurer of Ziskend Co., Boston; and L. N. Lucas, sales manager of Bastian-Blessing.

Ziskend Handles Fountain Units In New England Area

BOSTON—The Ziskend Co., veteran commercial refrigeration distributor here, has been appointed distributor in the New England area for Bastian-Blessing Co. products.

Equipment which the Ziskend Co. will handle in the Bastian-Blessing line includes soda fountains, lunchettes, carbonators, and Perfex Coca-Cola serving units.

The distributor announces that it has franchises available in Maine and New Hampshire for the equipment which it handles.

Servel Union Contract Amends Worker Seniority

EVANSVILLE, Ind.—A new labor contract, basically the same as the one previously in effect, was recently ratified by Servel, Inc. employees who are members of Local 813, United Electrical Workers, CIO, local officials have announced.

The contract is to remain in effect until June 24, 1950, except that the union retains the right to open wage negotiations after July 15, according to the union.

The few changes made in the contract include an amendment to the seniority provisions to give greater employment opportunities to persons with two or more years service with the firm and the establishment of an apprenticeship program for skilled trades that will be administered jointly by the company and the union.

Ellis, Board Chairman Of Controls Firm, Dies

MILWAUKEE—Harry W. Ellis, chairman of the board of Johnson Service Co. here, manufacturer of automatic temperature and air conditioning control systems, died April 1 after a brief illness. He was 84.

Well known in the air conditioning field, Ellis remained active in his post as board chairman following his partial retirement in 1938 after serving 25 years as president and general manager.

2-Month Shipments at Worthington Pass '48

WILMINGTON, Dela. — Though shipments by Worthington Pump & Machinery Corp. for the first two months of this year maintained a comparable level with the same months last year, new bookings are about 12% off from last year's average, Clarence E. Searle, president, declared recently.

"The decline in new bookings," he said, "began in the final quarter of 1948 and is continuing so far this year."

Shipments for the year 1948 reached a new peacetime high of \$92,009,180 as compared with \$84,968,637 in 1947, he stated.

New bookings for the year, however, dropped from \$91,769,008 in 1947 to \$81,844,979, or about 11%, he noted.

Unfilled orders at the end of 1948 amounted to \$60,902,418 as compared with \$70,203,925 at the end of 1947.

Autonator Concedes Its Immersion Water Heater May Constitute Hazard

CHICAGO—Autonator Laboratories Co. here recently conceded to the Federal Trade Commission that its "Hot Donut" immersion-type electric water heater constituted an electrical hazard that might even cause electrocution under certain circumstances if directions for its use were not scrupulously followed.

The company's attorney admitted these FTC charges in a stipulation filed with the commission consenting to the issuance of a cease and desist order on its methods of advertising the heater.

The stipulation stated that the company's advertisements, tags, and labels attached to the heater did not point out "the dangerous consequences which may result from the use of said product in some conditions of said usage."

If the FTC approves the stipulation, it was stated here, it will issue an order requiring Autonator to disclose possible consequences of use of the heater, to clarify its claim that the heater produces hot, boiling water in a jiffy, and to drop the use of the word "Laboratories" from its name.

Autonator conceded that it does not own, operate, or control any laboratory and does not employ scientists or technicians for study or experimentation.

Mrs. Bernadine Dunfee, a physicist employed in the electrical instruments section of the U. S. National Bureau of Standards, testified before the commission that the Hot Donut electrical water heater has a large current leakage that could produce electrocution if the water contained various mineral salts and if the person using the heater touched the metal container in which it was placed or the water itself while the current was on.

She pointed out that variable factors involved included the person's resistance to shock, whether he was grounded, and the conductivity of the water being used.

The FTC has made identical charges against Milton L. Lieberman, trading here as Jaxon Products and Elgee Products, Mfrs., who produces the "Heetmaster, Jr." water heater.

Morton Nesmith, attorney for the FTC, said that he intends to prove that Lieberman's heater and the Autonator are identical and both are made by Autonator.

The Autonator stipulation has not affected the Lieberman case, it was pointed out.

NARC May Alter Name To Indicate Wide Scope

CHICAGO—The board of directors of the National Association of Refrigeration Contractors has decided to recommend to the membership that the name of the association be changed to the Refrigeration & Air Conditioning Contractors Association.

It is felt that the present name does not adequately cover the industry as served by its members, some of whom sell, construct, install, and service both refrigeration and air conditioning equipment, while others specialize in either refrigeration or air conditioning, the board explained.

Air Cooling Kitchen Cuts Number of Mistakes, Cafe Owner Finds

OKLAHOMA CITY—A two-stage, 40-ton air conditioning system is a feature of the new Boulevard Cafeteria located at 1111 W. Classen St. here.

Said to be the largest in the state, the cafeteria seats 400 and averages 2,000 meals a day, according to C. B. Arrington, owner. In designing the establishment, Arrington laid plenty of emphasis on air conditioning for comfort, not only in the public areas but in the kitchens.

A temperature of 80° the year-round is maintained by two Westinghouse 20-ton refrigeration compressors, located in a "refrigeration room" at the left of the main dining room.

The two units, which are coupled to a single coil chamber and blower unit are thermostatically controlled to operate in two stages, 20 tons of air conditioning being sufficient under normal circumstances. The second unit cuts in during peak hours during the city's 100° summer weather, and frequently to boost cooling capacity in the 60 x 35-ft. kitchen.

"Keeping the kitchen personnel cool and comfortable during working hours, as well as patrons outside, is essential for best service," Arrington said. "We have discovered that there is a far lower percentage of waste, fewer mistakes, and costly re-cooking operations if the kitchen is kept as comfortable as the dining rooms themselves."

Vernay Is Dravo Agent In New York, New Jersey Area

PITTSBURGH—Dravo Corp. recently appointed Howard A. Vernay, Jr., as representative of its heating section in northern New Jersey and southern New York, excluding the territories of New York City and Long Island.

Vernay will be in charge of the distribution of Dravo "Counterflo" heaters for industrial and commercial use.

A 1938 graduate in mechanical engineering of the University of Maryland, he had been sales engineer for Orr & Sembover Co. before joining the Dravo organization. He will make his headquarters at Dravo Corp. offices, 30 Church St., New York City.

Catalog Issued by Chicago Metal Hose Corp. Offers Piping Data

MAYWOOD, Ill.—A new, colorfully illustrated catalog has just been issued by Chicago Metal Hose Corp. here containing full description and complete specifications for standard types of flexible metal hose, in a variety of metals.

In addition the catalog has complete sections on expansion joints for piping systems; stainless steel and brass bellows, and various conduits and special assemblies of these components.

Weatherhead Co. Makes Larger Net Profits on Smaller Sales

CLEVELAND—The Weatherhead Co. made a net profit of \$713,154 on net sales of \$24,216,047 during the year 1948, the company reported recently.

This compared with a net profit of \$611,674 on net sales of \$24,224,923 for 1947.

The firm's annual report stated that Weatherhead acquired the common stock of the Protane Corp. of Erie, Pa. in November, 1948.

NLRB Ruling Curbs Plumbers' Union

Board Claims Picketing Subcontractor Violates Ban on Secondary Boycott

ANNISTON, Ala.—A trial examiner for the National Labor Relations Board, March 30, ruled that a local of the A.F.L. Plumbers' Union violated the secondary-boycott ban of the Labor Management Relations Act by picketing the construction sites of a church and a Salvation Army "Citadel" situated in Anniston, Ala.

The examiner, Maurice M. Miller, found that the union fostered an illegal boycott aimed at the firm which held the plumbing subcontracts on the two projects because the firm did not employ union plumbers to handle the work.

Charges against the union—Local 498 of the Plumbers' Union with headquarters at Gadsden, Ala.—were filed by the Pettus-Banister Co. of Anniston, general contractor on the projects. The firm which the examiner found was the object of the boycott was the Collins Heating and Plumbing Co. of Anniston.

Most of the employees on the two

projects were members of A.F.L. Building Trades unions and they walked off the jobs Sept. 20, 1948, after the Plumbers' Union posted one picket at each site, the examiner reported. The 45 employees involved did not return to work until Sept. 29.

The examiner recommended that the local and its business agent, Robert Hadaway, be required to cease and desist from "picketing or related conduct" which would induce or encourage employees of any employer to engage in a concerted refusal to perform services with an object of compelling their employer to stop doing business with the Col-

lins firm.

The examiner rejected contentions of the union that, in the building industry, a subcontractor is either an agent or an "ally" of the general contractor. On this premise, the union argued that its dispute was a primary one with the general contractor rather than an illegal secondary boycott. However, the examiner found that the subcontractor "was, in fact and law, an independent, employer—engaged in a business of his own—and not a mere agent or employee of the general contractor."

As to the status of the subcontractor as an alleged "ally" in the dispute, the examiner said:

Jacobs Shutdown Hits Vendor, Washer

DETROIT—As an economy measure, the F. L. Jacobs Co. is closing down its manufacturing operations in Indianapolis and Louisville and moving them to its Detroit and Traverse

City, Mich. plants, the company announced recently.

These moves affect the Launderall and refrigerated Coca-Cola vending machine divisions.

"The Company [Pettus-Banister] did not ask its subcontractors whether or not they employed union men. It advertised openly for bids with respect to the plumbing work to be done at each of the construction projects; and there is undisputed testimony that the contract for the work would have been given to a 'unionized' subcontractor if the latter had not raised its bid. The undersigned [Examiner] infers and finds that the engagement of Collins was dictated by economic considerations, that it was a normal incident of the construction trade, and that it cannot be characterized as the enlistment of an 'ally' on the part of the general contractor or the subcontractor, in connection with a plan to withhold deserved recognition from the Respondent Union."

Unless contested by one of the parties within 20 days, the examiner's recommendations take effect as a Board order, enforceable in U. S. Court of Appeals.



FEAST YOUR EYES

ON THIS NEW Selling Opportunity

fedders

ROOM AIR CONDITIONERS

IT'S A FACT . . . You can sell Fedders Room Air Conditioners the same way and to the same customers as you sell other popular electrical appliances.

IT'S A PACKAGE SALE . . . a package installation . . . a complete system of electrically refrigerated air conditioning. No trade-ins . . . every sale means full profit.

HUGE MARKET . . . homes, professional and business offices, hotels, restaurants, institutions . . . wherever people work or relax they desire the comfort of cool conditioned air.

YES . . . it's a new appliance selling opportunity for you . . . take advantage of it NOW!



1/2 HP Window Model.
Cooling capacity under normal operating conditions up to 6100 btu/hr.



3/4 HP Window Model.
Cooling capacity under normal operating conditions up to 8850 btu/hr.



SOON—A SURPRISE—a beautifully styled Floor Console Model. All wood cabinet in Mahogany Finish

GET THE FACTS

FEDDERS-QUIGAN CORPORATION
Unit Air Conditioner Division, Dept. AC-1
1280 Niagara St., Buffalo 7, N.Y.

Kindly send to my attention all the facts on Fedders Room Air Conditioners.

Name
Title
Company
Street
City County
State

FEDDERS-QUIGAN CORPORATION
BUFFALO 7, NEW YORK

GREATER CAPACITY DFN DEHYDRATORS

- Stay on the line longer
- Need less servicing

See your jobber or write
McIntire Connector Co.
Newark 3, N.J.

delivered and installed,
plus 5 year warranty
and food protection!

6 CUBIC FOOT FREEZER
\$199.50

With full mark-up
for Distributors
and Dealers.
Write or Wire
NOW!

MODEL 60

another first for
Amana
REFRIGERATION DIVISION
Amana Society • Amana 14, Iowa

Dealer Gives Free Tickets to Self-Serve Laundry Using Same Brand Washer He Sells

DENVER—Free tickets entitling housewives to do the family wash in a self-service laundry were offered recently in a promotion by Lawrence and Dudley Bell, owners of Bell's appliance store here.

The Bells developed the idea of using the self-service laundry, which is located near their store, as an extra automatic laundry showroom after they had supplied all the laundry equipment for the establishment. The laundry owner agreed to the plan.

Under the plan, Bell's ran a quarter page newspaper advertisement inviting Denver housewives to do their own laundry at the company's expense. They had merely to stop in at the appliance showroom or write in for tickets that would entitle them to do their entire family wash at the self-serve laundry.

Dudley Bell explained, "While we have automatic laundry equipment

hooked up in our showroom for demonstration, we can accommodate only a few women at a time.

"We have found that home laundry demonstrations which involve a few pieces of sample clothing are not nearly as effective as when the housewife does her own laundry.

"Therefore, by making it possible for the housewife to use the facilities of the neighborhood self-service laundry, each can put the machine through its paces without a salesman standing nearby."

Bell pointed out that the laundry owner is an enthusiastic booster of General Electric automatic washers and driers, with which his establishment is equipped, and "actually helps us to sell many housewives who are his own customers."

Names and addresses of each housewife who writes in or calls for free laundry tickets are placed in a "follow-up file." These are then followed up by telephone calls or direct mail inviting the housewife to call an "estimator" who will visit the home and figure all costs for plumbing and installation.

The first offer was limited from Feb. 22 to March 1 but will be repeated periodically, according to Bell.

Bison Distributes Apex Line

BUFFALO—Edmond R. Arundell, sales manager of the appliance division of the Bison Electrical Co., announced his firm's appointment as distributor for Apex washers, driers, dishwashers, and vacuum cleaners.

FRB Contends Seasonal Factors, Not Reg. W Deterred Appliance Sales

WASHINGTON, D. C.—Seasonal factors, and not Regulation W, has been the cause of declining sales and rising unemployment in the major appliance industry, the Federal Reserve Board contended here recently in communications with members of Congress.

The regulation has not deterred sales of these appliances, the board declared. On the other hand, it has helped the average consumer more than it has inconvenienced him by restraining inflationary pressures.

Several appliance dealer associations have sought relaxation of Regulation W, one asking a reduction to 10% down with 24 months to pay up the balance, the board has revealed.

With the tougher selling now required, the board thought that employment of salesmen in appliance stores very probably has been boosted.

The board pointed out that the ratio of consumer credit to income today is 4% as compared with 7% pre-war.

Glick Elected President Of Columbus, O. Dealers

COLUMBUS, Ohio—The Electric Dealers Association, Inc. here has elected William Glick of the Glick Furniture Co. its president for the coming year, according to a recent announcement.

At the same time the association elected Claude McGinnis, General Appliance Co., first vice president; Donald Rice, Westgate Electric Co., second vice president; and Stanley Dennis, Columbus & Southern Ohio Electric Co., secretary-treasurer.

Directors named were William Cook, Cook Furniture & Appliance Co.; George Dykes, Buckeye Radio Lab.; Henry Emswiler, Emswiler Electric Co.; Dwight Haggard, Budd & Co.; Ralph King, King Sales Co.; Leo Loudner, Bexley-Loudner Electric Co.; Walter Mendelhall, F. & R. Lazarus & Co.; Arthur Ridgely, Davis-Ridgely Co.; and Frank Masaro, Lord Furniture Co., retiring president.

'Offer' of \$50 for Old Unit Promotes Refrigerator Sales

INDIANAPOLIS—A new approach to promoting trade-ins of major household appliances, is being used successfully by the Kirk Furniture Co. appliance department here.

Instead of advertising that the store is allowing \$50 for trade-ins of old refrigerators, Kirk "offers" \$50 for old refrigerators.

In a recent large newspaper advertisement, Kirk said: "We need 50 used electric refrigerators. We will give you \$50 trade-in allowance for your old electric refrigerator regardless of age, make, or condition. This trade-in sale applies only to this Norge Self-D-Frosting refrigerator Model ND848."

G-E Introduces Lines In One-Day Meetings

BRIDGEPORT, Conn.—The General Electric appliance and merchandise department recently staged a series of one-day, coast-to-coast sales meetings to present General Electric major appliances, vacuum cleaners, and automatic blankets, to distributors and their salesmen, A. M. Sweeney, general sales manager of the department has announced.

The meetings, under the supervision of Sweeney and C. W. Theelen, manager of sales, were held in 25 major cities in all G-E merchandising districts.

All the meetings highlighted new merchandising methods and products, and pointed up General Electric's aim of providing practical, hard-hitting retail selling information to its distributing organization.

Another purpose of the meetings, Sweeney said, was to continue to carry the educational story on General Electric's appliances to the new salesmen employed by G-E distributors since VJ-Day, and to effect closer liaison between the company and all its appliance distributors.

Wittenburg Gets Board Post

SYRACUSE, N. Y.—C. H. Wittenburg was elected executive vice president and treasurer of the board of directors of the Gould-Farmer Co., General Electric distributor.

Associated with the company for the past 14 years, Wittenburg has been treasurer since 1942.

RUST PROOFING CHEMICALS
CORROSION PROOFING CHEMICALS
PHOSPHATE COATING CHEMICALS
METAL CLEANERS & RUST REMOVERS
PICKLING ACID INHIBITORS

Pioneering Research and Development Since 1914

AMERICAN CHEMICAL PAINT COMPANY

AMBLER, PA.

Manufacturers of Metallurgical, Agricultural and Pharmaceutical Chemicals

Simplify YOUR PRODUCTION WITH ADVANCE TOOLING

We Specialize in "Tough" Die Problems

Many manufacturers depend on Advance for complicated stamping dies for difficult drawing and forming operations. The largest job, or the smallest, can benefit from Advance tooling techniques which have revolutionized many manufacturing processes.

If sheet metal stampings are a major part of your production cost, it will pay to consult Advance on your die and tool problems. We have the experience, engineering skill and mechanical facilities to meet your tooling requirements. Ask for full information.

Write
FOR BULLETIN

ADVANCE DIE & TOOL CO.
6800 MADISON AVENUE
CLEVELAND 2, OHIO

PHONE: WOodbine 9191

A NEW Line of SUPERIOR DRIERS
The DRIERS with the Plus Features

- ★ MODERN DESIGN
- ★ EFFICIENT OPERATION
- ★ REFILLABLE AND NON-REFILLABLE TYPES
- ★ ALL BRASS CONSTRUCTION

For complete details and specifications on the New Driers and other Superior products, ask your Wholesaler for a copy of our NEW Catalog R3.

(or a copy may be obtained by writing to us)

Superior Valve and Fittings Co.
160
300 WEST LIBERTY AVE. PITTSBURGH, PA.
OFFICES IN PRINCIPAL CITIES STOCKS: CHICAGO, LOS ANGELES, NEW YORK, PHOENIX

Part of Warren Co. 1949 Commercial Line



This display was arranged by Warren Co. in a large Atlanta arena so that approximately 200 dealers could get a good look at the 29 different styles offered by the firm.

200 Warren Dealers View New Models In Atlanta

ATLANTA—The Warren Co., Inc., introduced its 1949 line of commercial refrigerators to approximately 200 dealers and district sales managers at a two-day national sales convention held here recently.

The line, comprising 29 different styles, was displayed by model groups in a large arena. Many of the units were in operation and filled with the foods for which they were designed.

Among the new models are a two-decker, open-type, self-service case and a wide-type open refrigerator with sliding doors below, both for meats and dairy products.

Also unveiled was a wide-type fruit and vegetable case with mirror. Warren has a mock counter of the same exterior design, with mirror, which can be lined up with the fruit and vegetable case for dry vegetable storage.

Still another new model is a third combination refrigerator, with the middle section for packaged meats. Of the other combination models, one provides one compartment for cheese, butter, eggs, and milk, and another for frozen foods, while the second is a display and storage combination unit for dairy products, fruits, and vegetables.

A new superstructure unit (or canopy) with mirror, which can be set atop any Warren refrigerator and which provides an extra open-type top compartment for dry display, was also introduced.

On the second day of the convention, an engineering conference was held. Speakers included James Rodgers and Steve Luther, president and assistant engineer, respectively, of White-Rodgers Electric Co.; W. P. Myers, Jr., Alco Valve Co. engineer; and W. S. Woodside, southeastern sales manager of United Cork Cos.

This session was followed by a sales promotion meeting.

The convention was climaxed with a banquet and floor show in the Biltmore hotel. Guest speaker was Dr. James L. Brakefield, of Birmingham, Ala., noted lecturer, author, and educator.

Price Protection Policy Goes Into Effect at Zenith Radio

CHICAGO—Zenith Radio Corp. recently announced a price protection policy for dealers that guaranteed them against any losses caused by price slashing. The company stated that it had no inventory of old models on hand.

Agreement Permits York To Use Recold Defrost System In Some Coils

LOS ANGELES—Under the terms of a license agreement recently signed between York Corp., and Refrigeration Engineering, Inc., here, York will manufacture certain refrigeration coils using the water defrost method.

The water defrost method, which was patented by Recold in 1940, employs the use of ordinary tap water for defrosting the refrigeration coil.

The coil can be defrosted while maintaining, within the refrigerated space, a temperature of below freezing.

This is done by supplying water from a source outside the refrigerated space to the spray head, whence it is sprayed on the coil, caught in the drip pan, and drained therefrom by one of the conduits.

Unused water remaining in the spray head is drained by the other conduits. By these conduits all water is removed from the refrigerated

space without being frozen and without materially affecting the temperature of such space.

Water defrost coils such as are being manufactured by Recold and other manufacturers operating under a license agreement with Recold are widely used for all types of low temperature storage in applications requiring from one to several hundred coils.

The license agreement between York and Recold brings the number of manufacturers operating under this agreement to a total of eleven.

McIntosh, Ex-Liquid Carbonic Head, Dies

CHICAGO—W. K. McIntosh, who recently retired as chairman of Liquid Carbonic Corp., died last month at his home at the age of 71.

He started as a stenographer in 1902 and after filling various offices in the organization was elected president in 1923. In 1929, he became chairman, in which capacity he continued active in the management of the company until his retirement last January.

Warm Air Convention To Hear Report on Illinois U. Research

CLEVELAND—The National Warm Air Heating & Air Conditioning Association will hold its annual mid-year convention Tuesday and Wednesday, June 21-22, at the Edgewater Beach hotel, Chicago, the group announced.

Mornings will be devoted to business and the afternoons to entertainment, according to George Boedener, secretary-treasurer of the association.

The program committee has scheduled a number of informative reports covering recent developments in the association-sponsored research program at the University of Illinois, and arrangements are being made for guest speakers to talk on timely subjects.

Scheduling of afternoon entertainment of golf tournaments, races, bathing, and other recreational activities is under way, according to the association.

**YOU CAN BE SURE
...IF IT'S
Westinghouse**

**SELL THE LEADER..
SELL WESTINGHOUSE!**




**THE WESTINGHOUSE
FOOT PEDAL CONTROL
SAYS "NIX TO SITUATIONS
LIKE THIS"**

Yes, Foot Pedal Control can be a life saver in many cases... it's standard equipment on all Westinghouse Water Coolers. But, that's only one reason why these Water Coolers sell easier... make friends faster. Just look at some of these other selling features: Automatic Stream Height Regulator, Stainless Steel Top, Anti-Squirt Bubbler and the 5-Year Guarantee Plan. Also available is a Push Button Bubbler Kit* which works in conjunction with the Foot Pedal Control.

Add them all up... you'll see why the Westinghouse Water Cooler line is the faster selling line—the leader line. Remember, with Westinghouse you have seven models, a size and type for every need.

*Available at slight additional cost.

WESTINGHOUSE ELECTRIC CORPORATION
Appliance Division Springfield 2, Mass.

FOR FURTHER INFORMATION CALL YOUR
WESTINGHOUSE DISTRIBUTOR OR MAIL
THE ATTACHED COUPON TO
WESTINGHOUSE ELECTRIC CORPORATION
SPRINGFIELD 2, MASS.

REQUEST FOR FURTHER INFORMATION

Name _____

Street _____

City _____

State _____

436

Built Right—Priced Right—Amazingly Free From Service

MARSH

**Pressure Gauges
Dial Thermometers**

*The gauge with the
Recalibrator

**Ask for this New
Refrigeration Booklet**

JAS. P. MARSH CORP.
DEPT. D., SKOKIE, ILLINOIS

Some Say

"It's a Great Life"

Will you have One?

A Grass Roots Job

Here's Why Dealer Salesmen Need Training

By Edward R. Taylor, Manager, Market Development, Hotpoint, Inc.

I'm sure no one questions the importance the retailer plays in the ultimate sales of a product. The retail dealer or salesman controls absolutely the final decision of what product a customer purchases.

Or, to put it even more strongly, a retail salesman can change a prospect's decision to buy a certain make of merchandise and switch that prospect to another brand regardless of how determined that prospect may have been when he walked into the dealer's store.

It's being done every day—it is the very history of retailing.

Just to prove this point, let me tell you of an experience I had the other day. I was in Boston and I made it a point to visit some of the larger department stores to check their appliance activities.

One store in particular was featuring a special promotion on its own brand of refrigerators, offering a certain model at quite an attractive price. There was a good crowd in the department which contained the usual assortment of nationally-advertised makes in addition to the store's own brand.

I spotted a likely looking prospect and his wife in discussion with a salesman and I sidled up as closely as I could to eavesdrop on their conversation.

Although the prospects had come in to the store as a result of the advertising on the model being featured—they seemed more interested in one of the nationally-known brands.

As they opened and closed the door of the model and made favorable comments about it—the salesman kept stressing the value offered in the other at the bargain price.

reason these prospects were in the store was because of the tremendous advertising and promotion that had been put behind its own brand of refrigerator.

That, actually, this national manufacturer was able to offer better dollar-for-dollar value in its products by virtue of the greater volume created by advertising . . . and to cite the case of Waltham Watch as a classic example of what happens to a company that doesn't do the very things he was condemning.

This salesman has been making sales the easy way for so long that he just can't bring himself out of those slipshod ways. I know that he wasn't being malicious in his remarks about that refrigerator—actually he was really making it tougher on himself.

It would have been much easier for him to fan the prospect's interest in the national brand—but the poor fellow didn't know what to say. Hence, he clung to the price argument of the other model for all he was worth until the prospect finally saved him.

Now is the hour to make our advertising stand up in the only rating we can go by and believe in—the sales rating. And the place to do that is at the dealer level.

All we've got to do is to get down to those basic fundamentals of selling. Sure, freshen them up . . . embellish them with any new thoughts and ideas you may have—and you'll be surprised at the results.

Don't assume that dealers have salesmen—in a large majority of cases they don't even have sales clerks. We checked around and found that business had been coming in so easily that dealers considered salesmen superfluous.

The dealer himself had been doing most of the selling.

Few Know How To Start

But very few dealers—including the larger ones—have anything resembling an adequate sales force today nor do they have much of an idea of how to go about building one.

So here was a job that must be tackled at the very foundation—a job involving a program that would tell a dealer how many salesmen he should have to get his share of the business, how to recruit and select them, and how to compensate them.

Then comes the job of training them and here again it is a grass roots job—teaching them the very rudiments of salesmanship—the approach, the follow-through, how to demonstrate, how to qualify a prospect, how to use the telephone, the door-to-door technique, how to write good sales letters, the use of the "Yes, but" psychology, how to ask for the order, etc.

To accomplish the job most effectively, it should be handled in as many different ways as possible. For

example, the dealer should conduct meetings on his own—in many instances taking each salesman individually.

The distributor, too, conducts meetings at regularly frequent intervals—some of them large gatherings, others consisting of only 10 or 15 salesmen. The factory, too, gets into the act by holding sectional meetings covering as large a portion of the retail salesmen as can be accommodated.

But just as the types of meetings vary—so should the methods of presentation vary to prevent any possibility of them becoming stale.

Company Furnishes Materials

Hotpoint furnishes all of the materials necessary to put on these different types of meetings; for example, we offer complete meeting guides which give the dealer everything he needs to put on a meeting whether it be for 15 minutes . . . two hours, or half a day.

We also provide flip charts . . . slide films . . . quiz material . . . home study courses . . . motion pictures . . . recordings to be used with easel charts . . . scripts on examples of how to stage good and bad demonstrations . . . demonstration gimmicks such as putting a glass eye dropper and broom stick through the wringer at the same time to demonstrate the flexibility of the wringer . . . the silk scarf on the range cooking unit, etc.

Then, too, salesmen must know all there is to know about competitive products so that he can always turn a prospect's question to his advantage. We furnish pocket evaluations which are similar to slide rules listing features of Hotpoint products compared with competition . . . feature by feature comparison charts . . . rebuttals to competitors' claims, etc.

Sell Salesmen on Advertising

And, most especially, we sell the retail salesmen on the value of Hotpoint's factory advertising and sales promotion—proving to him that these activities help him do a better selling job and hence earn more money and enjoy greater security.

This process is kept going all year-round and it is increasing in intensity each month. More and more meetings are scheduled to be held by factory personnel in the field . . . the distributors are now engaging in a greatly stepped up training program . . . dealers are being persuaded to hold sales meetings not less than once each week to train their men and keep them trained.

A yearly service of Sales Builder Bulletins is offered to retail salesmen offering valuable advice on all phases of their job . . . follow-up letters go out from the factory at regular intervals to the salesmen's homes . . . roving reporters stop in at our dealers incognito and reward retail salesmen with cash prizes for good sales presentations.

The best advertising in the world fails if it leads the prospect to an uninformed or prejudiced dealer or retail salesman. But it's not impossible to win these retailers over. They can be educated.



Are You Looking For An Easy Way to Handle Stoves, Refrigerators and Freezers

Solve Your Problem with the New **ROLL-OR-KARI Dual Trucks**

Patented Step-On-Lift • Folding Handles
Capacity 1000 Lbs. • Shipping Weight 40 Lbs.
WRITE TODAY

THE ROLL-OR-KARI CO.
MANUFACTURERS
ZUMBROTA • MINNESOTA

you'll find

Wagner Motors
on the job . . .

on Main Street, U.S.A.



The Wagner fractional horsepower Motor...

These small-sized Wagner Quality Motors can be found throughout the length and breadth of America, doing a thousand different jobs in the shops, schools, homes, farms and factories that comprise Main Street, U. S. A. They power compressors, stokers, frozen food cabinets, pumps, and many other motor-driven devices.

The steadfast dependability of Wagner Fractional Horsepower Motors has made them the first choice of many manufacturers of small machines and appliances. Take a tip from these manufacturers—if you need motors that will give trouble-free performance and build

customer satisfaction—choose Wagner Motors. The complete line of Wagner Motors covers a wide range of types and sizes for every application.

BUYERS OF WAGNER MOTORS GET NATIONWIDE SERVICE! More than 450 Wagner Authorized Electrical Service Stations and Parts Distributors augmented by 25 Wagner-owned Service Branches are ready to immediately supply on-the-spot service, factory guaranteed exchange motors, or genuine Wagner parts. Write for Bulletin MU-24 for complete list.

Bulletins on the complete line of Wagner Motors are also available.



Capacitor-Start Motor



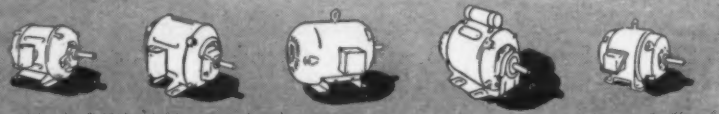
Repulsion-Start Induction Motor

Wagner Electric Corporation

6441 PLYMOUTH AVE., ST. LOUIS 14, MO., U. S. A.



Consult Wagner Engineers on all Electric Motor Problems



• ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES • AUTOMOTIVE BRAKE PRODUCTS •



● **COLOR**, is the new "buy-word" in home freezers! Introduced for the first time by the 1949 Ben-Hur Deluxe Farm and Home Freezer, Ben-Hur **COLOR** is meeting enthusiastic praise in homes everywhere — as a welcome means for brightening up home kitchens and making utility room decorating an exciting event again. But the rich "Ben-Hur Blue" is only ONE

of many new selling features in the Deluxe Ben-Hur 1949 Freezer. You'll like the new cabinet front design, new latch with crystal-clear Lucite handle, new cold control* and temperature indicator, new wire food baskets and dividers, and new accessories — if you want them — like ice cube makers and alarm system. Add the FIVE YEAR GUARANTEE on the refrigeration unit, and other time-proven BEN-HUR features, and you have a Deluxe BEN-HUR Home Freezer line that deserves TOP BILLING in any sales program. Write for selling plan and full details TODAY. (*Patent applied for)

BEN-HUR MFG. COMPANY, Dept. AC, 634 East Keefe Ave., Milwaukee 12, Wisconsin

BEN-HUR FARM and HOME FREEZERS
HEALTHFUL LIVING THROUGH FROZEN FOODS

Locker Plant Pushes Foil Wrapping

Free Foil-Packaging of Meat
Spurs Use of Better Materials

JEFFERSON CITY, Mo.—"Surprising" the locker patron by wrapping one of his meat cuts in more expensive foil has been successfully used by Louis Landwehr, owner of the Frosted Food Locker Plant here, to interest customers in having many or all of their meat cuts wrapped that way.

Landwehr, like many locker operators, has been steadily merchandising better-quality wraps to his locker customers ever since 1941, when he constructed the 1,400 unit locker plant.

Many customers, however, evinced little interest in foil, due to its heavier expense, or had little or no time to watch a working demonstration of it.

"We knew that one of the best ways of increasing profit volume from processing sales was to step up the customer to using the better foil wrap," Landwehr said, "and therefore cast around for some means of impressing the customer vividly with the difference."

Under the plan which was ultimately developed, Landwehr has instructed two regular butchers in the rear processing room of the locker plant to wrap one out of each batch of orders packaged for renters in foil—while the others go into more standard paper wrappings.

"In other words, if a customer is having a quarter of beef cut up, resulting in 24 or more packages, we wrap one steak, or one fillet, carefully in foil, without telling the customer anything about it," Landwehr said.

"Naturally, he will eventually find the foil-wrapped package in his locker, and frequently, the renter will bring it up to the service desk at the front, thinking that someone else's meat has been placed in his locker by mistake. This, of course, gives us an excellent opportunity to point out the fine texture of the meat, its protection against freezer burn, and better appearance.

Turner Heads Electric Club of Toronto, Ont.

TORONTO, Ont., Can.—W. I. Turner was elected president of the Electric Club of Toronto at the annual meeting at the Royal York hotel. More than 1,400 members attended the banquet.

Other officers elected were: Past president, W. E. Ross; first vice president, L. E. James; vice presidents, J. S. McGregor, J. G. Inglis, M. B. Hastings, J. H. Smith, George T. Dale; treasurer, W. E. Poynton; auditors, W. D. Brown and W. MacNeill.

The executive committee is composed of J. A. Clish, G. W. Lawrence, H. R. Fardoe, C. Ogilvie, J. H. Brace, W. J. Wylie, E. M. Brydon, A. V. Armstrong, W. G. Pengelly, H. M. Morris, A. Powell, E. M. Haacke, D. G. Ferguson, T. A. Lindsay, G. Appleton, E. McLeod, H. H. Gardiner, W. Peterson, I. M. MacLean.

"Quite frequently, by stacking the foil-wrapped package well to the rear, it may be several months before the locker renter comes upon it—which is all the better for us, because invariably the meats which have been protected by foil are in far better eye-appealing condition than ordinary paper-wrapped varieties."

Since undertaking this plan, the central Missouri locker operator has found that approximately three out of five customers immediately begin ordering the foil wrap for their more expensive meats, and quite a few of them for all meats.

"It is merely a matter of getting the prospect's attention, at a time when packaging is going to mean the most to him," Landwehr further stated.

"Invariably the customer will start asking questions about the foil, whereas he may never have had time to look over a display of it at the front of the plant."

Frosted Food Locker Co. carries a complete choice of locker wrap-

pings, including two grades of standard paper, glassine, and foil. Charge for the foil paper is 75 cents per 100 lbs. as against 65 cents for standard wrapping paper or glassine wraps.

"This small difference means very little to the customer who has rented a locker to insure a plentiful supply of top-quality meat," Landwehr pointed out. "Therefore, we have been able to increase our foil wrap more than 300% in the space of a few months."

The Jefferson City locker plant, which has been increased in size steadily since 1941, has undergone several changes, one of the most important of which was moving the main processing room to the rear.

"We have left some equipment and a small meat cutting counter at the front, immediately behind the entrance," Landwehr said, "where poultry may be quickly dressed or special cuts turned out while a customer waits."

"Heavy production, however, where large quarters or sides of beef or

whole hogs are concerned, have been moved to the rear. The reason for this is simply that meat cutters were too frequently interrupted by customers coming into the locker plant, or stopping to ask questions while meat is being cut. Separated from traffic at the rear, the cutters can now turn out much more per hour."

Although the locker plant is located in the center of Missouri's capital city, the heaviest percentage of locker renters are farmers.

"Farmers stand to benefit more from the use of the lockers, than our city residents, we have found," Landwehr pointed out. "There are many farmers who regularly slaughter all of their own meats who in the past have become weary of the spicy taste of sausage, smoked or sugar cured meats."

"By concentrating our advertising on the farm public, pointing out that the locker permits year-round fresh meats, we have many farmers riding long distances into the city to make regular use of lockers."

February Standard Washer Sales Up, But Still Lag Behind '48

CHICAGO—Factory sales of standard size household washers and ironers during February were slightly above those of January but were well below those of February, 1948, the American Washer & Ironer Manufacturers Association reported here recently.

Washer sales for the month of 208,500 units was 17% above January and 43% below February of last year.

Ironer sales of 28,250 units were just above the 28,000 reported for January. They were down 45% under February, 1948 the association report indicated.

Roberts & Mander Reports Loss

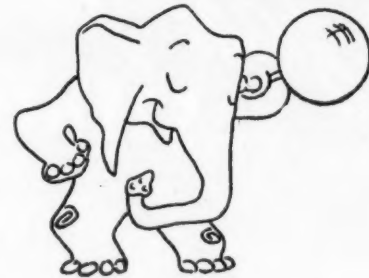
HATBORO, Pa.—Roberts & Mander Corp. here has announced a net loss of \$296,827, after a \$173,060 Federal and state tax credit for the fiscal year ending Nov. 30, 1948. This contrasted with a net income of \$208,292 during the fiscal year of 1947.

Make it of STAINLESS STEEL!

Make it Better Looking



Make it Stronger



Make it Longer-Lived



Make it More Salable



Make it of a Material that is Available

Make it of ALLEGHENY METAL

"The Time-Tested Stainless Steel"

Complete technical and fabricating data—engineering help, too—yours for the asking.

ALLEGHENY LUDLUM STEEL CORPORATION

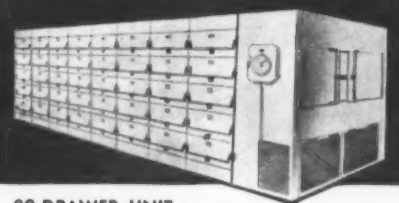
The Nation's Leading Producer of Stainless Steel in All Forms



Pittsburgh, Penna. . . . Offices in Principal Cities

Allegheny Metal is stocked by all Jos. T. Ryerson & Son, Inc., Warehouses

Portable "WARM ROOM"
FROZEN FOOD LOCKERS



80-DRAWER UNIT

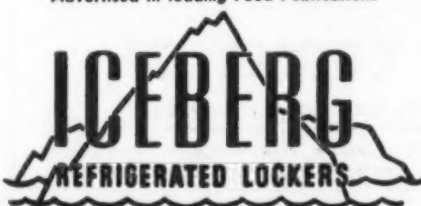
**FREEZES THE FOOD
NOT THE PEOPLE!**

**A MODERN DEVELOPMENT IN
FROZEN FOOD LOCKER PLANTS**

Some choice territories available
Write, Phone or Wire

ICEBERG LOCKERS, INC.
175 West Jackson Blvd., Chicago 4, Ill.

Advertised in leading Food Publications



Shutdown of Aluminum Anodizing Vats Is Prevented by 60-Ton System

**Abundant Chilled Water
Flows Through Jackets
To Maintain 70°-72° Level**

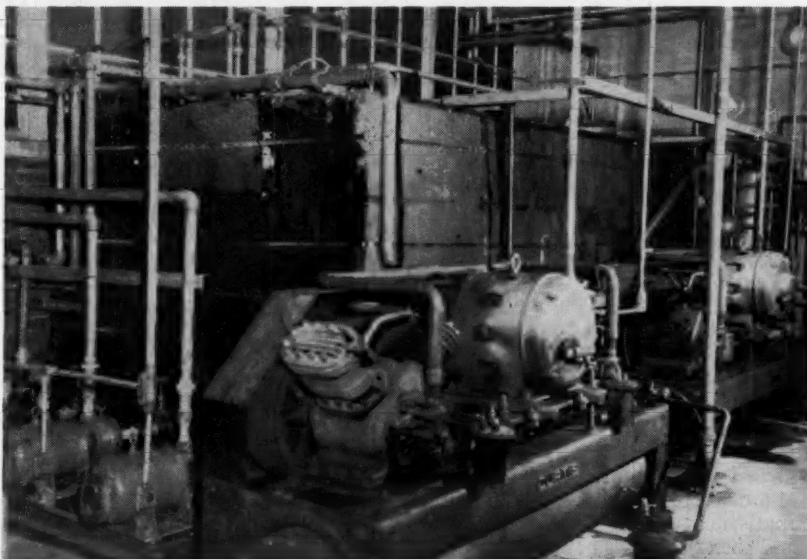
By C. Dale Mericle

LOUISVILLE, Ky. — To maintain large aluminum anodizing tanks at a precise 70° to 72° F., two large water-cooling systems have been installed at plants of Reynolds Metals Co. here by Stuckert Equipment Co., Louisville refrigeration contracting firm headed by A. E. Stuckert.

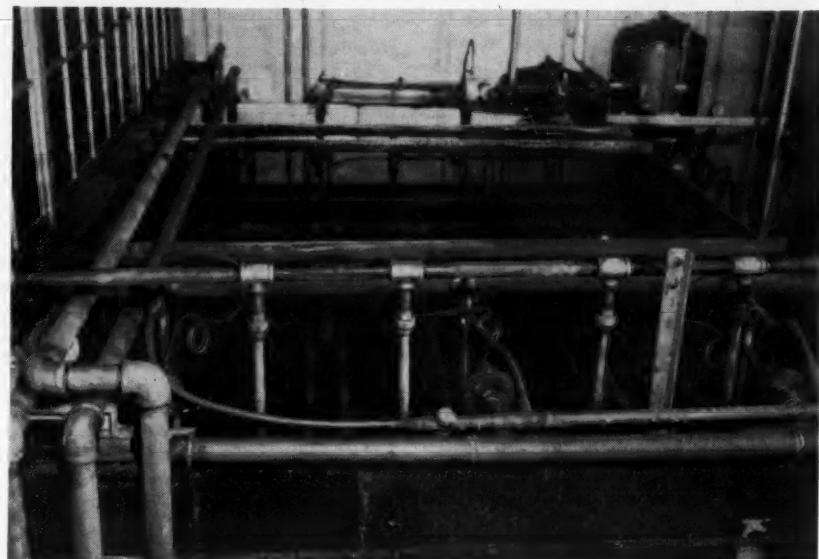
In one plant 50 tons of refrigeration is employed; in the other, 60 tons, the second having two Curtis 30-ton condensing units while the first has a 30 and a 20-hp. machine. "Freon-12" is the refrigerant.

Keeping the anodizing tanks at the right temperature is extremely important, Stuckert points out. If the temperature is allowed to rise above the 72°, it interferes with the proper hardening of the anodized surface finish on the wide variety of aluminum products produced by Reynolds.

The anodizing baths consist of sulphuric acid having a strength of from 15% to 18%. Electrical load is 15 volts, the amperage is between 3,000 and 5,000. The hardness of the anodizing surface is measured in a so-called dielectric test which represents the volts necessary to penetrate this surface. In laboratory tests it has been found that dielectric as high as 300 volts was necessary to penetrate the anodizing surface.



These two condensing units (30 and 20 hp) supply refrigeration for the large, open, insulated water tank in the background employed to keep aluminum anodizing tanks between 70° and 72° F. for Reynolds Metals in Louisville, Ky. Note water pumps at left.



Looking into the water tank from above, one can see the double rows of "Freon-12" copper pipe coils. The four pipes in the foreground supply compressed air that violently agitates the water and increases the heat transfer rate.

Formerly, the company attempted to control the temperature by pumping well water through the jacketed anodizing tanks, but this did not prove satisfactory, according to Stuckert.

"Occasionally," he said, "the tanks would become too hot, so the company would be forced to suspend operations for half an hour or so to let them cool off."

The mechanical cooling system devised by Stuckert involves the use of large insulated water tanks from which the cooled water is circulated

through the jackets of the anodizing vats and thence back to the chilling tanks.

The tank for the 50-hp. system measures 12 ft. long, 7 ft. wide, and 6 ft. high. That for the 60-ton installation is 22 ft. long, 6 ft. wide, and 5 ft. high. Both tanks are open at the top.

Both installations are almost identical, the coils consisting of 1½-in. o.d. hard copper tubing welded with Silfos into double-row coils extending from the top to the bottom of the tanks. The tanks, incidentally, are

open.

Each double-row coil is fed by its own thermostatic expansion valve and is fitted with an accumulator to insure that only dry gas is returned to the compressor. Refrigerant is fed to the expansion valves from manifolds at each end of the tank, each manifold being also provided with a liquid indicator.

In the smaller installation, two of the five sets of coils are operated off the 20-hp. machine, three off the 30-hp. unit.

The two machines are controlled by pressure controls, and each one operates independently of the other. No attempt is made to control the sequence of the two machines' cutting in or out.

Centrifugal pumps circulate the

water from the chilling tanks to the anodizing vats. Return water is delivered at the top of the tank and taken from the bottom of the tank at the opposite end.

The water pumps are thermostatically controlled. Whenever the temperature in any of the anodizing tanks rises above 72° the circulating pump will circulate chilled water through the lead jackets in the anodizing tank until the temperature has been reduced to its proper degree.

"This process is so rapid that with proper equipment and installation, non-fluctuating temperature can be maintained," Stuckert says.

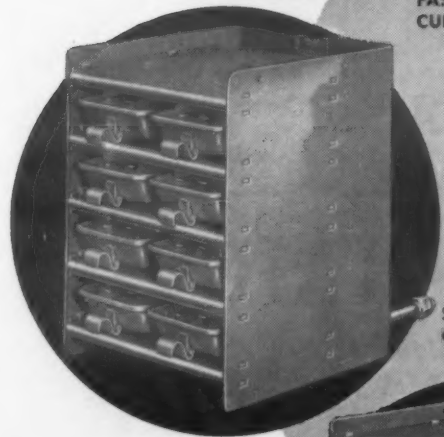
The tanks operate on a temperature difference as close as 6° F., he declared.

(Concluded on next page)

For fast production...
Peerless FASTERFREEZE cube makers



FINNED
FASTERFREEZE
CUBE MAKER



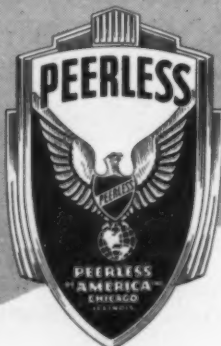
SNAP-OUT
CUBE MAKER



NORMAL DUTY
CUBE MAKER

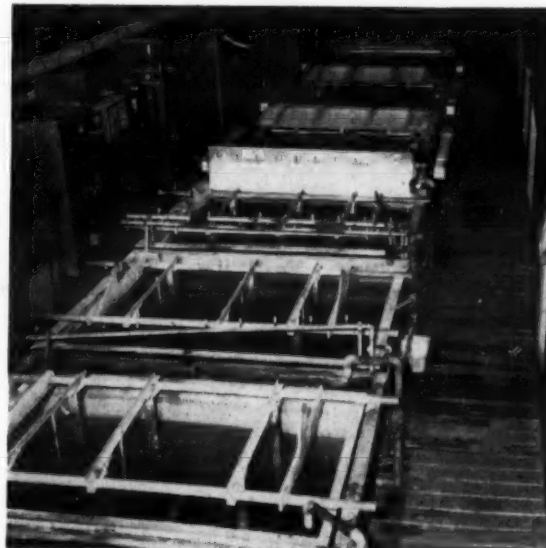
Continuous refrigerant tubes in each shelf of a Peerless FASTERFREEZE Cube Maker insure quick production of ice cubes in quantity for back-bars, reach-in boxes, soda fountains, etc. Ideal for restaurants, hotels, hospitals and other institutions. All models are constructed of heavy aluminum, with copper tubes for use with Freon, Methyl or Sulphur Dioxide, aluminum tubes for Ammonia. There is a wide range of sizes and capacities. Snap-Out FASTERFREEZE Cube Makers have levers integral with each grid which instantly free full-sized cubes, by the tray if desired. The Peerless Finned FASTERFREEZE Cube Maker combines fin coil surface and cube freezing in a single balanced unit, with a wide selection of coil surface and cube capacities. Coils have non-soldered return bends with decorative covering on front of unit.

Send for Circular on
Specifications and Prices



PEERLESS of AMERICA, Inc.
2901 LAWRENCE AVE., CHICAGO 25, ILLINOIS, U.S.A.

Vats Process Reynolds Metals Products



Here are the large anodizing vats in the Reynolds plants which have to be kept at constant temperature for this process. Chilled water is circulated through lead jackets around the tanks.

AGAIN-La Crosse LEADS!



WITH NEW
CURVED
STAINLESS
STEEL
SLIDE-AWAY
DOORS -
FINGERTIP
CONTROLLED

La Crosse DRY STORAGE BOTTLE COOLER
EFFICIENCY—BEAUTY—CONVENIENCE—ECONOMY

A companion piece to the new La Crosse Ice Cube Maker. Adjustable partitions and shelf offers greater capacity—Sturdily constructed—Recessed base—Size 4'—6'—8'—10'. Also available with high bake finish. Shown above is a 6' Stainless Steel model.

Cube Makers—Direct Draw Dispensers—Tap Boxes—Drainboards

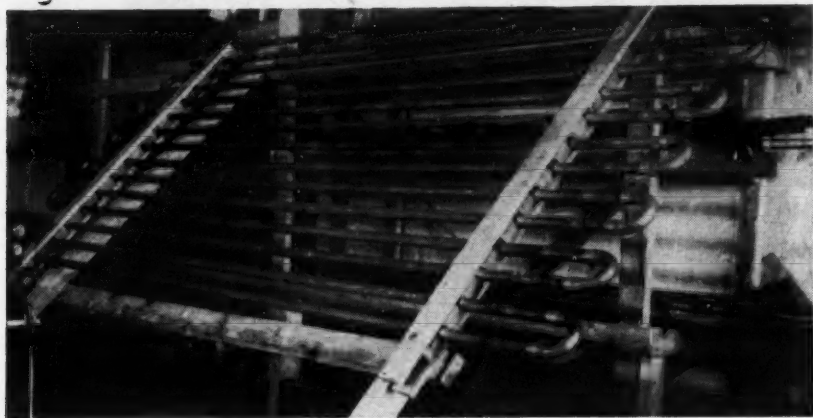


LA CROSSE COOLER CO.

2809 Losey Blvd. So., La Crosse, Wisconsin

Export Representatives: Melvin Pine & Co.
Cable address: Eximport 80 Broad St., New York 4, New York

Unorthodox Welding Seals Bends Securely



LEFT: The hard copper pipe coils were made up in the shop of A. E. Stuckert, contractor who handled the job, by mounting the straight tube in this wooden "fixture" and then welding the return bends. A thick bead of silfos was built up around the joints to prevent water seeping into pinholes and then freezing, expanding, and eventually ruining the joint which would otherwise be leakproof.

RIGHT: To simplify charging the large compressors with oil, a special oil charger was developed by Stuckert. By connecting to the high-pressure side and crankcase of the compressor, the "gadget" lets the compressor do the work of forcing a measured amount of oil into the machine.

Agitation Speeds Heat-Transfer Rate

(Concluded from preceding page)

"One of the secrets of this installation is the overabundance of cooling water, which can readily handle any surge in the load, and the other secret is agitation of the water in the chilling tanks. The latter, incidentally, are covered on the outside with 2 in. of cork insulation coated with mastic.

"Pipes connected to the plant's compressed air lines are mounted in the water tanks, the amount of compressed air supplied being controlled manually by a hand valve. When the air is on, the water in the tank 'boils' violently or moderately, depending on how much the valve has been opened. This agitation greatly increases the rate of heat transfer between the refrigerant tubes and the water."

The copper coils which went into the water tanks were fabricated by Stuckert in his own shop, the tubing being clamped in special fixtures made out of 1 x 4's to which spacer blocks had been nailed. With the tubes clamped in position the return bends were welded on.

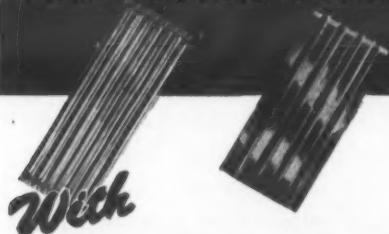
Thanks to a previous similar job, Stuckert says he discovered a trick in welding these bends which should save him a lot of service calls in the future with this job.

"Ordinarily a good welder tries to make a weld as neat as possible with no excess metal built up around the joint. This is fine for most applications, but I discovered that it will cause trouble in a water-chilling job. Even with the so-called 'perfect weld' there is always the possibility that an extremely fine pin-point opening will be left at the joint.

"This wouldn't cause a refrigerant leak because there could still be perhaps 1/4 in. of gas-tight weld behind this opening and so it would be perfectly satisfactory for most applications.

"In water chilling, however, water would naturally work into this fine opening where it would freeze. The refrigerant suction pressure in these Reynolds installations averages 20 to 40 lbs. As the water froze it would expand, making the fine hole larger.

Cut your PRODUCTION COSTS



GREENE MOULDING ASSEMBLIES

If you are using plated castings or one-piece stampings for grille work, louvers, decorative trim, etc., Greene Moulding Assemblies can mean real savings for you. With them you get

- Lower cost per unit
- Equal or greater strength
- Reduced weight
- Economical repair or replacement
- High quality appearance

CLIP AND MAIL TODAY

Greene Manufacturing Co., Inc.
1028 Douglas Ave., RACINE, WISCONSIN
☐ Please supply me with complete information on savings possible with Greene Moulding Assemblies
☐ I am attaching blue prints and specifications for quotes

NAME
TITLE
COMPANY
CITY STATE

When the machine cycles, the ice melts, of course.

"On the next cycle perhaps there would be more water to freeze, the hole would be enlarged again, and so on, until finally the joint would be badly distorted and leaking, which in water chilling, isn't good, to put it mildly.

"What I did here to prevent such

a catastrophe was to first make a secure, neat weld on each joint and then build up a heavy bead of metal over each end of each bend. In appearance it looks like an amateur's job of welding, but actually, it's done deliberately and should prevent any rupturing of the tubing or bends," Stuckert believes.

Incidentally, to make future serv-

Special Oil Charger



copper tubing extensions. Teed into the tubing at the top is a smaller length with a flare for connecting into the high side service connection.

In the tube extension at the bottom is a sight glass, a line shut-off valve, and a flare nut for connecting the end of the tubing into the crankcase connection of the compressor.

After the oil charger is connected to the high side as well as the suction side it is an easy matter to purge same and charge the "gadget" with the necessary amount of oil. After "cracking" the service valve from the high side and opening the suction valve, the oil can be readily charged into the crankcase by opening the hand valve.

The pressure from the high side will force the oil into the crankcase, and the liquid indicator will show when oil has entered the crankcase.

"This oil charger saves time and refrigerant because it eliminates a lot of the drawbacks that are found when shutoff valves do not shut off, when some of the refrigerant is still left in the oil in the crankcase, and when evaporating builds up pressure and pushes the oil through charging opening," explained Stuckert.

ice and inspection calls on these two systems a little easier to handle, at least with respect to recharging the compressors with oil if and when necessary, Stuckert devised a hefty "gadget" that makes the compressor do most of the work in recharging.

A hard copper tube 2 1/4 in. o.d. was capped at each end with suitable soft

MODEL 306 THREE LEVEL DISPLAY CASE

Triple-shelf design means easier access... faster turnover. Each shelf independently refrigerated. Fluorescent lighting throughout. Ends removable for continuous display.

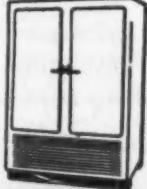
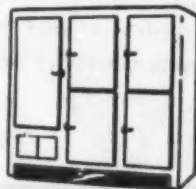
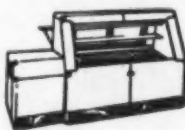


MODEL 3508 ALL PURPOSE DAIRY CASE

Huge capacity in proportion to floor space occupied makes this 8-ft. wall case especially practical. Wide doors permit speedy self-service. Inviting shelf arrangement, with price card molding on each. Completely refrigerated. K-Beam lighting enhances appearance of products displayed.

feature **KOCH**
the **COMPLETE LINE**
and **YOU FOLLOW THE**
LINE OF LEAST RESISTANCE

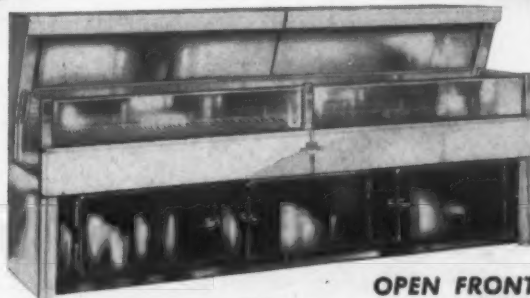
There is a Koch Refrigerator or Display Case for nearly every type of business. The models shown here are representative... but there are many other sizes and styles.



prove it to yourself KOCH SELF-SERVICE SELLS ON SIGHT

3 REASONS WHY: Here's a trio of KOCH self-service refrigerators that any dealer will warm up to. They're beautiful...they're practical...and they speed business along. Since 1883, KOCH quality and leadership have set the pace in refrigerator manufacture. Get the facts, and you'll see why KOCH is the line of least resistance.

KOCH Refrigerators
NORTH KANSAS CITY 16, MO. Since 1883



MODEL 5710

OPEN FRONT DISPLAY CASE

Ideal for pre-packaged fresh meats, produce, dairy products, delicatessen, and bottled goods, this 10-ft. open front case is the last word in self-service. More accessible merchandise means speedier selection... bigger sales. Handy refrigerated space in lower compartment. Can be placed end-to-end for unbroken mass display.

KOCH Refrigerators North Kansas City 16, Mo. RN314

Gentlemen: Please send full information regarding KOCH Refrigerators.

Name

Address

City Zone State

Write today for details and open territories.

They'll Do It Every Time . . . By Jimmy Hatlo



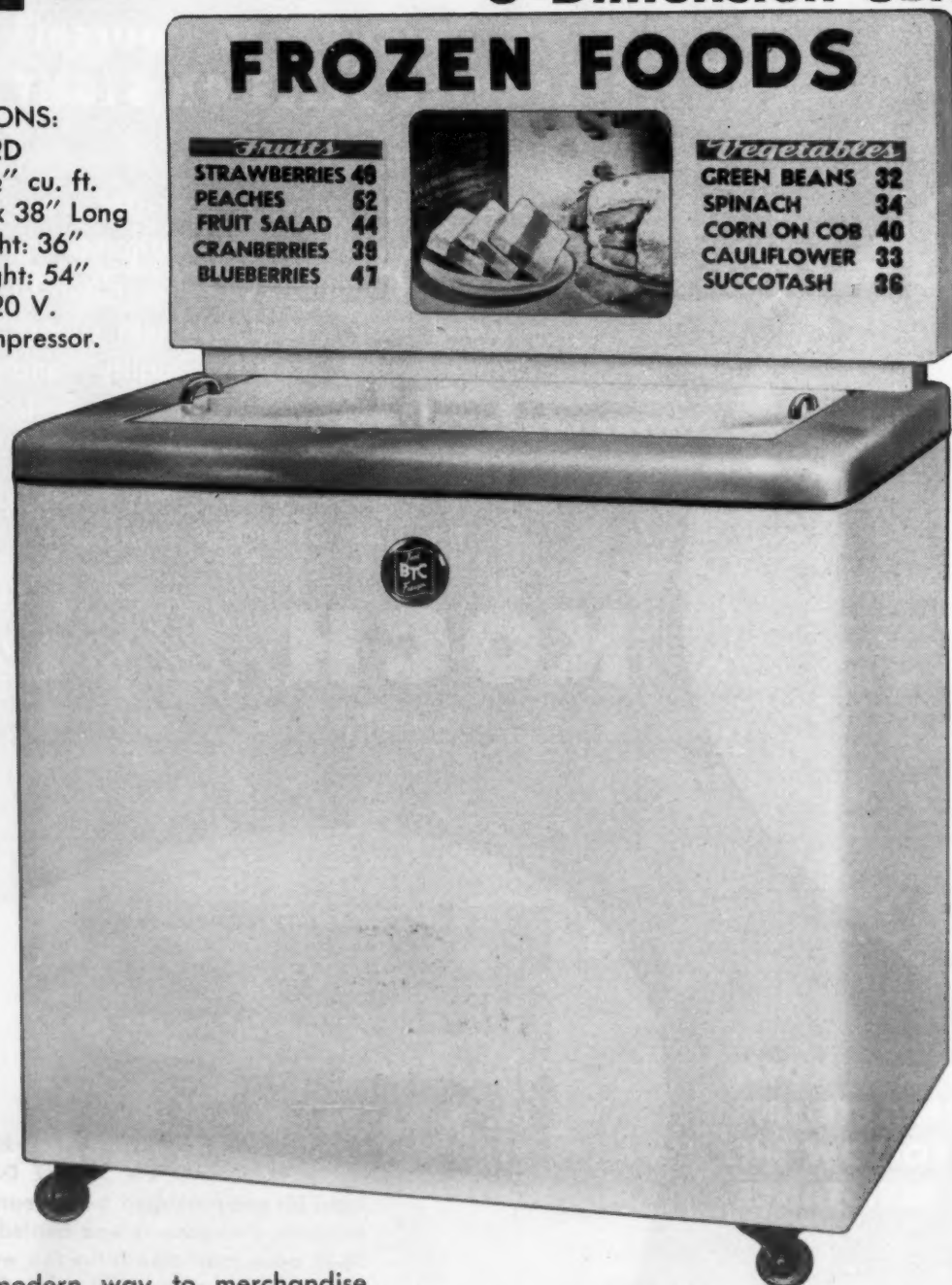
Do You Have 'One Foot In the Door'?

HOW TO MAKE CUSTOMERS STOP AND SHOP

Use **BTC** Portable Display Case with 3-Dimension Color

SPECIFICATIONS:

Model DC6-2D
Capacity, 5½ cu. ft.
23½" Wide x 38" Long
Cabinet Height: 36"
Over-all Height: 54"
Motor 110-120 V.
Hermetic Compressor.



Here's the modern way to merchandise frozen foods—a portable display case you can move where you want with a full-color 3-dimensional food picture to turn buying impulses into sales. The new BTC Portable Display Case, Model DC 6-2D, is small enough to fit practically

anywhere, yet holds 190 average frozen food packages; low-level superstructure is fluorescent lighted with three dimensional color; two price panels; stainless steel trim; Santocel insulation, vapor-sealed and smooth rolling casters.

Write for details on profitable BTC Distributor Franchise.

THE BREWER-TITCHENER CORPORATION, BINGHAMTON, N. Y.

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark
registered
U. S. Patent
Office:
Est. 1926



Copyright
1949,
Business News
Publishing Co.

F. M. COCKRELL, Founder

Published Every Monday by BUSINESS NEWS PUBLISHING CO.
450 W. Fort St., Detroit 26, Mich. Telephone Woodward 2-0924.

Subscription Rates: U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: \$5.00 per year; 2 years \$8.00. All other foreign countries: \$7.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Please send remittance with order.

GEORGE F. TAUBENECK
Editor and Publisher

PHIL B. REDEKER, Editorial Director

C. DALE MERICLE, Associate Editor

JOHN SWEET, Assistant Editor
HUGH MAHAR, Assistant Editor
GEORGE HANNING, Assistant Editor
ROY DENIAL, Assistant Editor
Editorial Assistants: MARGARET DEAN,
MARGARET POMMERENING, LOUISE
GINET, AND LORRAINE MAJOR

E. L. HENDERSON, Business Manager
ROBERT M. PRICE, Adv. Representative
ALLEN SCHILDHAMMER, Adv. Rep.
ALLEN S. RUSSELL, Adv. Rep.
BETTY JANE KING, Adv. Secy.
YVAUGHN CRYSLER, Subscription Mgr.
WALTER J. SCHULER, Production Mgr.

Member, Audit Bureau of Circulations. Member, Associated Business Papers.

VOLUME 56, No. 15, SERIAL NO. 1,047, APRIL 11, 1949

If Buyers Can't Get In A Store, How're You Gonna Sell 'Em?

ALL the reasons why appliance sales seem to be slowing down may not be apparent to the naked eye. A number of hidden factors could be influencing this situation. Take, for example, the difficulty of getting to the big downtown stores.

Traffic congestion undoubtedly is one of the most serious problems confronting department store merchandisers and downtown specialty dealers at the present time. The situation has reached such grave proportions that it merits special consideration from the entire industry.

Because busses and streetcars are so crowded, and because in most metropolitan centers parking lot space is far from adequate, shoppers tend to stay home. This may have a lot to do with declining sales volume in the appliance trade.

If the mere chore of getting into a store has become harrying and vexing, no wonder sales volume isn't holding up.

It has been hoped by most metropolitan stores that traffic congestion morass in which retailers have been floundering would somehow solve itself. But such is not the case. Successful solutions are few and far between. Stuck with enormous investments in their locations, these stores are also stuck with their customers' ever-mounting parking problems and difficulties of penetrating jammed-up traffic.

In New York City—the most obvious example—police should be given credit for avoiding a 100% traffic bottleneck. Although hopeless chaos seldom occurs, traffic does crawl, and parking space for shoppers is almost non-existent. It is expected that metropolitan New York shoppers soon may be forced to abandon their autos outside the city and rely entirely upon busses, taxis, etc. for transportation to centralized shopping areas. And as anybody who has ever tried to taxi across New York City's narrow cross streets knows, that ordeal takes years off (and out of) your life.

Experts employed to solve the difficulty, it seems, are adopting a do-nothing attitude toward the whole business. Although they converge at conventions and meetings and wring their hands, thus far they have accomplished nothing of value.

Frankly, they don't know what to do about it—none of them.

"Astronomical figures are quoted as to the money congestion is costing the public," states H. W. Griffin of the New Jersey State Highway Commission. "But as yet, little diligence has been shown by the highway planners and economists toward serious inquiry into the actual or approximate value of time lost through congestion."

Shoppers may not have statistics on the time they lose, but they do know how it annoys them. No wonder they aren't in a mood to buy!

While the experts are moaning "woe is me," our cities and their streets and parking lots continue to become more crowded, and the condition grows more critical day by day. The automobile industry's high production rate isn't helping, either.

If retailing can hope to survive in jammed metropolitan business districts, it appears that the problem must be lifted from the easy-going laps of the traffic experts, the city-planners, and City Fathers, and solved by the big retailers themselves.

Their entire future is at stake.

Meanwhile, the present buying slump continues to vex national manufacturers who have grown to depend on these metropolitan outlets. Because an increasing number of thwarted shoppers are getting acquainted with outlying neighborhood stores where the traffic is less congested—rather than brave the battling throngs of the downtown areas—perhaps a recasting of promotional direction on the part of sales executives might be timely.

Designed for Servicemen



200 Entries Expected In New Truck Body Carries Modernized Store Contest Complete Workshop

NEW YORK CITY—Over 2,000 Chambers of Commerce, civic organizations, and trade associations, blanketing the United States, are being invited to enter the second national competition for the "Best Modernized Store of the Year," sponsored by the International Store Modernization Show.

This year John W. H. Evans, managing director of the show, is preparing for some 200 entries. \$500 in prizes will be awarded the winners, selected by a jury committee of the American Institute of Architects, headed by Morris Ketchum, Jr., author of "Shops and Stores."

The entries will be judged and exhibited during Store Modernization Week, at the 1949 Store Modernization Show, June 19-24, at Grand Central Palace in New York. Other exhibits will include developments in store fronts, lighting fixtures, escalators, floor coverings, display cases, air conditioning systems, ice makers, cash registers, credit authorization systems, and coin vending machines.

Another feature of the show will be daily clinics and forums, this year conducted by the New York University School of Retailing, with one clinic each day. Speakers will be retailers and store planning specialists, store equipment manufacturers, bankers, architects. These authorities will analyze the basic aspects of store modernization: layout and traffic, lighting and color, displays and fixturing; store fronts; planning and budgeting.

Dill Talks to Chicago ASRE On Vapor Barriers April 14

CHICAGO—"Insulation and Vapor Barriers for Refrigerated Spaces" will be discussed by R. S. Dill, chief of the heating and air conditioning section, National Bureau of Standards, at a meeting of the Chicago section of the American Society of Refrigerating Engineers on April 14.

The meeting will be held at 8 p.m. in the Builders Club, LaSalle and Wacker Sts. Section officers for the coming year will be elected at this meeting.

ST. LOUIS—Adaptable for use in the installation and maintenance of air conditioning, refrigeration, and other types of electrical appliances and equipment is a new all-purpose service body manufactured by McCabe-Powers Auto Body Co., 5900 N. Broadway here.

Designated the "service-master," this unit provides facilities to literally carry a complete workshop to the job site. Weather-tight compartments on either side of the body are fitted with shelves, trays, and parts bins and each section may be individually locked.

To permit versatile arrangement, the shelves and bin partitions may be adjusted or removed. The body loading space has a one piece ribbed steel floor and is greater in area than the standard pick-up body.

Ladder rack, pipe racks, heavy-duty rear bumper and step, padded tie rails, and inside tire carrier are offered as optional equipment.

The service-master is 48½ in. wide inside and is available from distributors throughout the country for mounting on ½-ton, ¾-ton, and 1-ton chassis.

Midwest Power Conference To Open Soon In Chicago

CHICAGO—More than 80 leaders in the fields of power production, transmission, and consumption will speak at the 11th annual Midwest Power Conference sponsored by Illinois Institute of Technology and cooperating institutions April 18-20 in the Sherman hotel.

Discussions will cover steam generators, power system planning, feed-water treatment, network analyzers and analog computers, small power plants, control characteristics of industrial processes, central station equipment and operation, distribution systems, maintenance problems, heating and air conditioning, electricity in farm industry, steam contamination, heat pumps, diesel power, electrical sales, electronics applications, and gas turbines.

John B. Hewett Acquires William W. Short Co.

NEW YORK CITY—John B. Hewett, who for 10 years was sales manager of Anemostat Corp. of America, has acquired the William W. Short Co., Inc., 274 Madison Ave. here, which was organized and formerly operated by the late William W. Short.

The company, under the direction of Hewett, will continue to represent the following accounts in the greater metropolitan district of New York, Westchester country, Long Island, and northern New Jersey: Anemostat air diffusers, Titus registers and grilles, Drayer-Hanson coils and condensers, Chicago fans and blowers, Raytheon electrostatic precipitators, and Young regulator controls.

Hewett graduated in 1928 with a B.S. degree in electrical engineering from the University of Oklahoma. He then became field engineer and later sales engineer for General Electric Co.

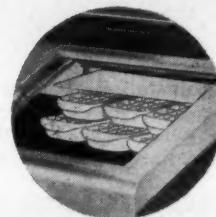
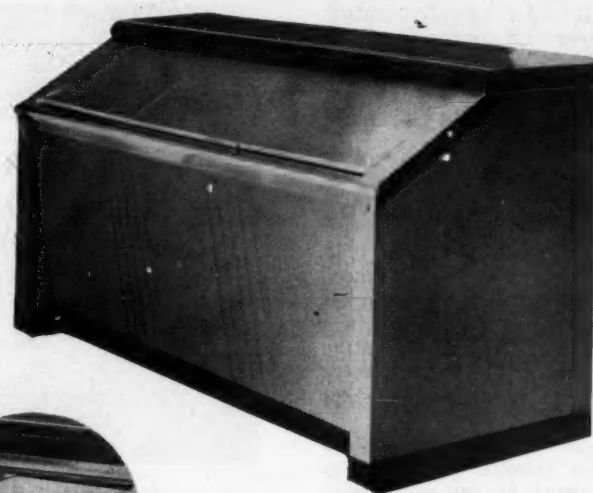
Subsequently he joined the Quinby Air Conditioning Co., distributor for General Electric in Rochester, N. Y., where he had charge of all engineering work involving heating, ventilating, and air conditioning.

Eubanks Joins Fyr-Fyter Co.

DAYTON—Irvin A. Eubanks, formerly sales promotion manager for Airtemp Div., Chrysler Corp., has been named advertising manager of Fyr-Fyter Co. here, it has been announced by Don O. Wood, executive vice president of Fyr-Fyter.

BEVERAGE COOLER

with a really PLUS feature!



EXCLUSIVE ICE CUBE MAKER TYPE EVAPORATOR

Provides about 25 lbs. Ice Cubes when and where you want them.

This new cooler, an outstanding advancement in Beverage Refrigeration, makes ice cubes in the same cabinet beverages are stored and provides an ideal "it pays for itself" selling theme.

Entirely automatic, disappearing doors, movable partitions, 3" insulation, aluminum interior, vapor sealed cabinet, stainless steel trim, toe insert with sloping front—the ultimate in mechanical and design perfection.

DEALERS AND MANUFACTURERS' REPRESENTATIVES WANTED

UTICA SHEET METAL CORPORATION
ORISKANY BOULEVARD, WHITESBORO, NEW YORK

FOR GREATER PROFITS

Install

DEPENDABLE

REFRIGERATION



VALVES

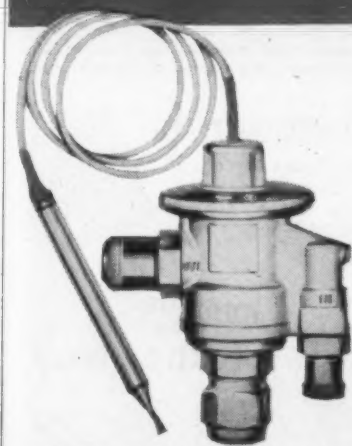
Model 207
ADJUSTABLE SUPERHEAT
THERMOSTATIC
EXPANSION VALVE

Compact, amazingly versatile, this ½ ton valve can be used for low, medium, or high suction temperature applications without adjustment or changing parts. Supersensitive, accurate, holds constant superheat. Liquid charged. Mounts in any position or ambient temperature without affecting bulb control. Write for bulletin E-131.

DEPENDABILITY

is a good component
of your product!

AUTOMATIC PRODUCTS COMPANY

2450 North Thirty-Second Street • Milwaukee 10, Wisconsin
Export Department, 13 East 40th Street, New York 16, N. Y.

Stocked and Sold by Good Refrigeration Wholesalers Everywhere . . . Recommended and Installed by Leading Refrigeration Service Engineers

THE RIGHT COMBINATION FOR PROFIT!



The popular FEDERAL Combination Walk-in Self Service Display. Ideal in design, made in Add-A-Section construction, a section can be added any time.

SELF SERVICE FRONTS OF TWO, THREE, FOUR, SIX, OR EIGHT DOORS OBTAINABLE.

For more product on display . . . this combination Walk-in and Display, is another Federal store tested sales getter. For over 30 years Federal has maintained its leadership for quality products.

Send for data on the Food Saver Selling Plan. Ask for desirable territories still available.

Federal

REFRIGERATOR MFG. CO.
Waukesha, Wis.

Locker Operator (Old Refrigeration Man) Finds It Pays To Show Off His Equipment

DENVER—An ex-refrigeration service engineer and contractor from Kansas came here in 1946 and started up a locker plant, incorporating into the venture some rather out-of-the-ordinary ideas of his own.

He is Asa A. King, who operates King's Frigid Food Bank at 2041 S. University Blvd.

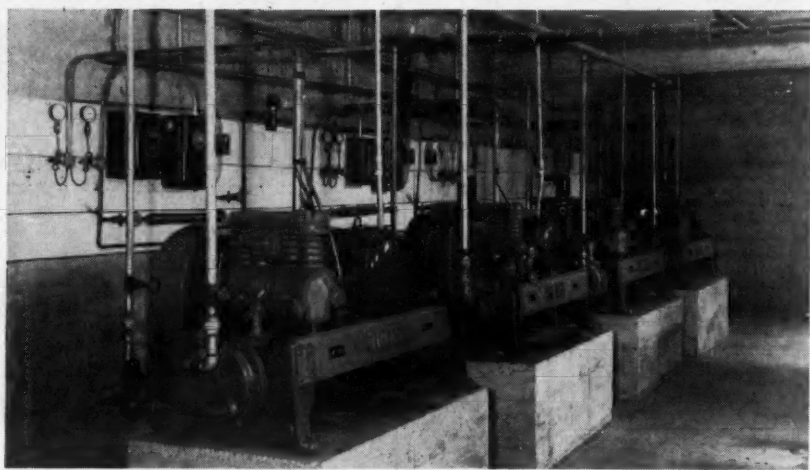
King installed all his own refrigeration equipment and makes it a point to take prospective customers on an inspection tour of his neat layout. As many as 10 customers a day are shown the refrigeration room—and the chill room, sharp freezer, cutting room, and locker rooms.

"We've found that a lot of our customers are familiar with refrigeration and want to see our equipment," he said. "Instead of considering this a nuisance, we have put the refrigeration room on exhibition."

The refrigeration equipment includes two 7½-hp. Mills condensing units for the 1,400 lockers and one 5-hp. Mills unit each for the chill room and sharp freezer.

Gauges, heat exchangers, and bypass valves have been worked into a neat panel arrangement on the wall behind each unit. Tools for maintenance are polished and laid out along a work bench running the full length of the opposite wall.

Fluorescent lamps illuminate the refrigeration room, and there are a series of recording thermometers



King installed these 5 and 7½-ton Mills units himself.

which keep a permanent record of the temperature maintained in each section.

The Carrier type coils used in each frigid room, thermostatic controls, etc., build up confidence in visitors and have been the "best possible advertising asset," according to King.

Unlike many locker plant operators, King doesn't believe that he can give full service to locker customers if he maintains a retail meat store at the front. Therefore, he sells meats only to locker renters, displaying a 20-cu. ft. home freezer full of frozen foods as an accommodation to his customers at the front.

He does, however, sell home freezers. Three models are on display in the front lounge.

"Home freezers often are the solution to problems of customers who want refrigerated storage, but cannot get a locker," he indicated. "We have sold a dozen to families who have been on the locker waiting list for a long time, and feel they cannot wait until someone else moves away or gives up his locker."

King's plant is located less than a block from Denver university, and in the center of a large moderate-income residential section. He set up his business here rather than in a

Working Away from Kibitzers



Processing room at King's Frigid Frozen Food Bank has been placed at the rear of the plant so that it is away from the kibitzing eyes of customers who love to "supervise" the cutting of their meats.

"plush" neighborhood, he declared, because he "figured that real savings on meat would appeal more to working families who must pare their budgets closely."

"This worked out very well," he asserted. "We have a long waiting list for lockers made up almost entirely of young couples who realize the economies possible with locker use."

King also has a heavy traffic with ex-G.I. college students who occupy a Quonset hut village a few blocks away and who regularly use lockers to help their government allowance go a bit farther in feeding the family.

When he set up his plant, King realized that a lot of time is wasted by having the processing room at the front of the building where customers interrupt the cutters or spend time giving personal instructions on how their meat is to be cut.

To do away with this, he located the processing room at the extreme rear of the building, directly over the basement refrigeration room. Here there are absolutely no interruptions, and two cutters can do the work of three at the front.

The processing room can be reached either through the chill room or through a long corridor down the right wall of the building.

"We still have quite a few customers who want to oversee the cutting operation," King indicated. "But

for the most part, we merely make out a cutting instruction ticket at the service counter at the front, and pass this back with the meat." The locker operator estimates he saves the cost of at least one employee in this way.

Also, King Frigid Food Bank doesn't utilize a double-check system for checking foods in and out of lockers, as do most other locker plants.

King operates on the theory that most people are honest, and prefers to trust his customers implicitly.

"I believe that every locker renter is a bit irritated at the necessity of signing for everything he brings in or takes out," the Denver locker operator indicated, "as if the plant had no trust in him."

"By merely turning over the key when it is asked for, giving the customer courteous service, we also do away with a lot of bookkeeping nuisance which wastes time, requires too much file space and often brings illwill."

"In more than two and a half years of operation, we have paid out less than \$50 in claims, most of that traceable to meats which were simply lost in handling."

Both exterior and interior of the King plant are done in white plaster with glass block trimming. The entire interior is scoured down once a week.

EXCLUSIVE, PATENTED FEATURES MAKE

KOLD-HOLD

TRUCK PLATES

THE MOST

dependable known

NO CASE OF OPERATIONAL FAILURE EVER REPORTED

When you buy Kold-Hold Refrigeration Plates for your truck, you can count on a lifetime of low cost, highly efficient refrigeration. For, with over one-half million Kold-Hold plates in use today, there has never been a case of operational failure reported. Trucks equipped with Kold-Hold Plates have been subjected to the most severe operating conditions possible, in all types of trucks. And never yet have they failed to provide the refrigeration needed.

"PERIMETER FREEZING" ELIMINATES OPERATIONAL FAILURES

The extra long life of Kold-Hold Plates is due to exclusive design features which eliminate the operational failures found in conventional plate design. In Kold-Hold Plates, the refrigerant passes through tubing along the outer edges of the plate first . . . before it reaches the center. (See drawings below.) As a result the outer edges freeze first and the strain caused by the expansion of the eutectic is placed on the center and strongest part of the plate. **DUE TO THIS PATENTED METHOD OF CON-**

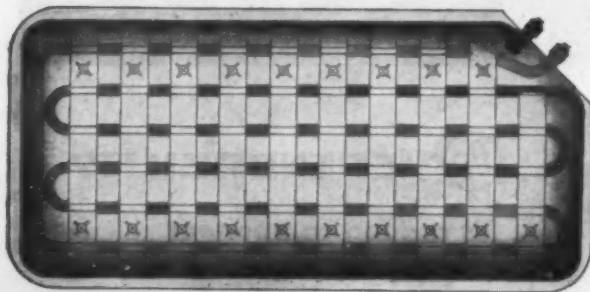
STRUCTION WHICH RESULTS IN THE PERIMETER FREEZING FIRST, KOLD-HOLD TRUCK PLATES CANNOT SPOIL YOUR TRUCK LOAD, THROUGH MECHANICAL FAILURE.

There are other patented features which help make the Kold-Hold Truck Plate the most dependable on the market today. The streamlined design and rounded corners provide extra strength where it's needed most. There's no chance for ice to cake over the end.

The drawing at the left shows how the tubing carries the refrigeration all around the outer edges of a Kold-Hold Plate before going into the center. This takes the strain off the edges. The end view shows how the center of a Kold-Hold Plate "gives" as the eutectic freezes and expands. In conventional plate designs, the center freezes and places excessive strain on the edges.

NEW CATALOG, JUST OFF THE PRESS

Send today for your free copy of this completely new catalog which explains the many advantages of Kold-Hold Plates.



KOLD-HOLD

Jobbers in Principal Cities

protects every step of the way

PROCESSING

TRANSPORTATION

KOLD-HOLD MANUFACTURING COMPANY • 500 E. HAZEL STREET, LANSING 4, MICHIGAN

Grocery and Meat Markets Are Your Biggest Prospects

Since 1935

Here's a source of business you have neglected during the "lull" times. Now you have to dig and the digging is more productive in this field. They have the space and the customers that can make a locker operation doubly profitable. Think it over—Somebody will get this business, will it be you? Don't forget that

MASTER FOOD CONSERVATORS

are your source of reliable and satisfactory units and that their reputation makes it easy for you to sell. So, cash in on it.

Can We Help You?

Two heads are better than one. So ask us for advice and help. Let's get together—it may mean money in your pocket.

Endorsed by and sold through distributors of refrigeration and insulation.



MASTER MANUFACTURING CORP.

121 Main Street

Sioux City 4, Iowa

Member of Frozen Food Locker Institute, organized for your protection.

Over 1,500,000 Master Food Conservators in Use

Brownrout Seafood Co. Forms Frozen Food Div., Expands Refrigerated Area

BUFFALO—The Brownrout Seafood Co., 451 Elmwood Ave., has completed a \$100,000 addition to its facilities, providing 18,000 to 19,000 cu. ft. more of refrigerated space, and has formed a frozen food division, it was announced by Louis N. Brownrout, a partner in the firm.

Brownrout said his company has been named wholesale distributor in western New York for the frozen food products of John H. Dulany & Son, Inc., Fruitland (Md.) processor. The new division will handle a complete line of Dulany products, including fruits, vegetables, poultry, some seafood, and also animal food.

James J. Driscoll, formerly with the Polar Locker Service, Inc., of Buffalo, has been appointed sales manager of the Brownrout frozen food division. He will have a force of five salesmen, according to Brownrout.

McArthur, Taylor Buy Interest In Arkansas Engineering Firm

MORRILTON, Ark.—D. L. McArthur of Oppelo and D. L. Taylor of Morrilton have purchased two-thirds interest in the Air Conditioning & Refrigeration Engineers, organized here early this year by Dan Carter.

Groceteria Aims To Maintain Personal Atmosphere In Self-Serve Meat Depts.

DENVER—A major reason for the success of self-service meat merchandising in the Miller's Groceteria Co. supermarkets here, is maintaining a friendly "personal atmosphere" between customer and meat department employees, according to Morris Miller, head of the chain.

The Denver supermarket chain has converted eight of 14 long-established supermarkets to self-service meats, and in addition, has opened three brand-new "superstores" since Christmas, each of which contains not only self-service, open refrigerated meat displays, but also 100% refrigerated produce departments.

Recognizing that a serious drawback to self-service operations is the "impersonality" involved, Miller's makes sure that self-service meat customers "see the same old faces" whenever they come into the stores.

For this reason, the meat cutting and pre-packaging rooms behind each self-service department have not been enclosed. Both butchers and packaging girls work directly behind the cases, where they can easily converse with customers across the top.

This has had a surprisingly good effect, it was pointed out. Packaging girls help customers find the meats they are looking for, discuss what cuts are best for the season, and thus make the customer feel that she is getting courteous, personal service. Naturally, many of the butchers on duty behind the former service counters have been retained, and they are still on the job, giving customers a friendly greeting, as before the change-over.

In order to convince "dubious" prospects of the practicality of self-service meat operations, the store has one "frontman" on duty by every case during the week, and always two on Saturday.

These men greet customers, help them to locate meats, explain the self-service operations when requested, and otherwise "service the traffic." They are neatly uniformed, in white.

Conversion of former service-type meat departments to self-service has been an "overnight" proposition in all cases. The Miller chain has trained a staff of "installation specialists" who are marshalled ready for the changeover operation late

Saturday night following closing of the store.

All of the old cases are trucked out over Sunday, new cases installed, connected and tested, ready for sales on Monday morning. Almost every customer is highly surprised to find this "sudden switch" has taken place, and invariably comments on it, according to Miller.

Among the innovations which Miller's has utilized to make a success of self-serve meats is keeping all cellophane wrapping materials for juicy, red meats under refrigeration. This makes the sheet easier to handle and less likely to stain or discolor from blood.

Also, the company has developed a system of "size trays" in which successive sizes of cellophane sheets for wrapping are stocked. Those sheets which are to be used on juicy, red meats, are stocked only in open, flat trays, painted a bright red, so that

there is no likelihood of the wrapping girl making a mistake requiring re-wrapping later on, or presenting an unattractive appearance.

Each of the self-serve departments has scored a considerable success with "variety packages" which combine several types of popular lunch meats in a single wrapper.

Sold at a one-package, flat price, these have been well accepted by housewives who pack lunches for husbands to take to work.

Detroit Contractors Sign Five New Member Firms

DETROIT—Five new members have been added to the rolls of the Refrigeration Contractors Association of Detroit, Fred R. Bolton, executive secretary of the association, announced recently.

They are Champion Refrigeration Service; Dayton Refrigeration Co.; New Center Refrigeration; Nortown Refrigeration, of Van Dyke, Mich.; and Refrigeration Engineering Co. of Highland Park, Mich.

'Popular Demand' Gets an Assist

CHICAGO—In presenting its "warm room" portable frozen food locker plants to food retailers, Iceberg Lockers, Inc., here, has developed a novel approach built around the idea of "take your customers into your confidence."

Iceberg supplies the grocer with attractively printed questionnaires. All he need do is pass them out to his customers and count the votes of those who would like to rent a frozen food locker. A tabulation of votes gives him the answer on acceptance, rentals, and immediate returns. Rentals paid in advance can very often cover more than the down payment for installation, it is noted.

Tough on Sunday Snoozers

FORT PIERCE, Fla.—Building permit for installation of a \$12,000 air conditioning system in the First Methodist church by Troy Refrigeration Co. has been issued.

COOL PROFITS in AIR CONDITIONING TYPHOON

PACKAGED UNITS
1½ to 10-ton
units

NATIONALLY
ADVERTISED

TYPHOON Air Conditioning Co., Inc.
794 Union St. • Brooklyn 15, N. Y.

40th YEAR
1909-1949



HOW WOULD YOU
SELL REFRIGERATION
TO THE PROSPECT WHO SAYS

I NEED NEW
EQUIPMENT
BUT I DON'T HAVE
THE MONEY
FOR IT



He is in the habit
of paying his
suppliers daily—

As a result, at the
end of the month there
is not enough left
to pay large down
payments and lump sum
monthly payments.

Your Answer Is
THE METER PLAN

OF
DAILY SAVINGS

Your Customer
Deposits
Just a Few
Quarters
a Day.



METER-MATIC COIN METERS ARE:

- LOW IN PRICE
- SIMPLE TO INSTALL
- FULLY GUARANTEED

Meter-Matic DM6 Meter
Two Door Case

MAIL
THIS
COUPON
TODAY

INTERNATIONAL REGISTER CO.
2626 W. Washington Blvd.,
Dept. 49-R, Chicago 12, Ill.

Please send me FREE: ☐ Meter Catalog
☐ Meter Plan for Selling Commercial Refrigeration

Company Name
Address
City Zone State



3-SHELF REFRIGERATOR
3-SHELF ILLUMINATION

Three
Fully
Refrigerated
Decks

A
BETTER WAY
to Sell
and Display

JORDON
EASY-REACH
MERCHANDISER

**JORDON SECTIONAL
WALK-INS
AND FREEZING ROOMS**

READY FOR YOUR CUSTOMERS

Rigid, lightweight, aluminum clad panels—completely interchangeable and adaptable to all requirements or space provisions. Normal temperature rooms have self-contained, factory installed and tested refrigerating systems. Fast, simple, lag bolt and pad assembly requires no special tools, skills, or equipment. Wide range of interior fittings from standard JORDON stock parts.

A system that provides BETTER REFRIGERATION and GREATEST CONSTRUCTION ECONOMY because your customer gets PRECISION MADE FACTORY ASSEMBLIES at PRODUCTION LINE COST.



6'-6" or 8'
HEIGHTS
6' or 9'-10"
WIDTHS
STANDARD
3'-10"
SECTIONS
EXPAND
COOLER
TO ANY
LENGTH
UP TO
25'-2" OR
LONGER

**URNS WALL SPACE
INTO SELLING SPACE**

See-Stop-Help yourself—is the principle behind this brightly illuminated, ultra-modern merchandiser. Without taking one inch of extra floor space it provides three times the capacity of the conventional single shelf. And each deck is safely refrigerated to protect the quality and saleability of the merchandise.

ALL-WELDED STEEL CONSTRUCTION

Designed—built—and finished to withstand the toughest use and abuse. Banderized and finished in JORDON mar-proof HI-BAKED White Enamel. Polished, large size ticket molding. End plates are removable for adding additional matching units. Full length mirror reflects contents of top shelf.

GENERAL SPECIFICATIONS . . . 6' long, 36" deep, 68-1/2" high (without plastic letters); 2" wide ticket molding. 30 square feet of refrigerated display.

WRITE—WIRE—PHONE

Jordon
AMERICA'S MODERN COMPLETE LINE
JORDON REFRIGERATOR CO.

Factory and Sales Division
58th ST. and GRAYS AVE., PHILADELPHIA 43, PA.
CABLE "JORDONREF" REG. 6-4310



Bombay District Seen Absorbing 30% of Refrigeration Units Sent to India from U.S.

By Eugene Hesz, International Market Analyst

In analyzing the fourth marketing area of the Dominion of India—that of Bombay—we shall digress for a moment from its purely commercial aspect to introduce the American exporter in a more concrete manner to the tropical metropolis which has given its name to this district, and comprises today over 3 million persons.

Almost unsurpassed in its beauty is the approach to Bombay, the commercial center of India. When coming from the Arabian Sea along the majestic waterway interspersed with mountainous islands, your boat passes a panorama of stately buildings on one bank and wide parks of tropical palms on the opposite side.

It is not so much the architectural beauty as the impression of the size of the layout which stamps Bombay as the real gateway to the heart of India. It is here where the most industrious classes of the Indian population are found.

ECONOMIC LEADERS

To a large degree, they are being lead—economically—by a relatively small number of Parsee (Persian) Indians, bearing the names of such worldwide repute in the spheres of commerce and philanthropy as Tata, Wadia, Petit, and Jijibhoy. Altogether, the Parsees in Bombay, the businessmen with western views, western thoroughness, and western aggressiveness, number probably less than 150,000 in the metropolitan area alone.

The marketing area of Bombay comprises the main subdivisions as shown in the accompanying table.

Some of the latest combinations of states, provinces, and formerly princely territories, e. g., the Saurashtra Union, have not been mentioned here. Prior to the latest historical events, the entire continent had not less than 564 independent

princely territories within its borders which have practically all since ceased to exist as independent political units.

The Bombay marketing area, situated in the western center of the peninsula, has an area of about 353,000 sq. mi. and a population of about 65 million. Whereas the percentage of urban population in India is 13, this percentage for the province of Bombay with its nearly 21 million inhabitants, amounts to 26. This automatically means better potential markets for the products of our industry.

MARKET POTENTIAL

Altogether, we are inclined to allot to this marketing area at least 30% of the total import capacity of the country for the products of the U. S. air conditioning and refrigeration industry. In other words, the dollar situation permitting, this marketing area should be able to absorb at present a maximum of 4,500 complete air conditioning and refrigeration units of American origin.

In this calculation, it has been taken into consideration that the total demand is actually 300% higher, adding up to a combined total maximum market potential of 18,000 complete units. The balance of the units will be imported into India from British sources mostly, a factor not devoid of interest for American companies possessing British Empire branch factories or assemblies and catering to the Empire.

The principal religious groups of the district are: Hindus (70%), Moslems (23%), and Christians and Parsees.

Bombay is the principal port and the second largest city of India. It serves western, southern, and central India as the chief distribution center for many imports, and is the heart of the Indian cotton textile

Area and Population of Districts in Bombay Marketing Region

| District | Area | Population |
|--|----------------|-------------------|
| Bombay | 76,443 | 20,849,840 |
| Baroda | 8,176 | 2,855,010 |
| Central India | 52,072 | 7,511,694 |
| Central Provinces and Berar | 98,575 | 16,813,584 |
| Deccan States | | |
| Agency | 7,651 | 1,693,382 |
| Gujarat States | | |
| Agency | 7,352 | 1,458,702 |
| West India States | | |
| Agency | 37,894 | 4,904,156 |
| Chhattisgarh States | | |
| Agency (except Patna and Kalahandi) | 31,599 | 2,819,840 |
| Danta | 347 | 31,110 |
| Palampur | 1,794 | 31,110 |
| Gwalior | 26,367 | 4,006,159 |
| Kolhapur | 3,219 | 1,092,046 |
| Portuguese India (Daman, Diu, and Goa) | 1,469 | *624,000 |
| Totals: | 352,958 | 64,690,633 |
| | sq. miles | |

*Approximate.

industry.

Next in importance as an industrial center in western India is Ahmedabad, with a population of nearly 600,000. Other cities, and at the same time marketing centers, are Poona and Sholapur (Bombay Province), Baroda (capital of Baroda) with 153,000 inhabitants, Indore (capital of Indore) the second textile center of India, and Nagpur (capital of the Central Provinces) with 300,000 inhabitants.

Its commercial importance is due to its prosperous weaving mills, cotton spinning and pressing factories, and the extensive manganese deposits in the neighborhood.

The most important part of this area is Bombay Province. The Central Provinces belonging to this region contain, together with Berar, the most valuable cotton soil of all of India. Rice and wheat are also relatively abundant.

LIVING STANDARDS LOW

However, for a general characterization, it must be remembered that standards of living are very low in general. A number of large cities contain commerce and the centers of manufacturing, but the main pattern of this marketing area, as almost everywhere in the subcontinent of India, is the small village with self-sufficient agriculture, producing consumer goods by means of home industries.

As a consequence of the heat and a lack of funds for machine buying, hand labor seems to be abundant, but

is more expensive, when properly organized and used regularly for specific tasks, than would appear at first sight.

Again, the typical India picture presents itself: food supplies must be reorganized with the help of better transportation and the assistance of refrigeration, and then only a beginning can be made to modernize agricultural and industrial methods.

Urgent as modern air conditioning methods may be in a very hot, tropical climate, food preservation still must receive preference.

At present, the milk supply is inadequate. Bombay, with nearly 3 million inhabitants, consumes at present about 600,000 lbs. of milk daily.

POWDERED MILK ONLY

On account of the conditions prevailing, the law forces distributors in general to use only powdered milk. No fresh milk at all is permitted in the making of ice cream. Butter is sold in tins and manufactured at present only by two firms in Bombay.

Even this sketchy picture shows some aspect of the vast improvements which the district is waiting for. Consulting engineers of our air conditioning and refrigeration industries may find here a fruitful field for many years.

Other livestock is also handled in this metropolis, and the natural outflow is an abundance of raw wool which has led to a prolific export trade. It has been estimated that Bombay alone exports about 16% of the entire wool exports of India and Pakistan together. For hides and skins, the corresponding figures for the Bombay area vary between 16.1 and 24.8% for the different types of animals.

Fishing plays a very important role in this district, and over 100,000 tons of fish are caught yearly in the Bombay Province alone. The government has taken energetic steps to accelerate the safe transportation of fish to the consuming centers. It is here where private capital has already taken a hand and modern methods, with modern appliances, are rapidly conquering the field.

Mining is of great importance in this district. The main products are iron ore, coal, manganese ore, and bauxite.

EMPLOYMENT FIGURES

A typical remark by an observer of the American government on the spot will indicate where progress is hampered, and to what extent modern appliances are lacking:

"In spite of efforts to step up production (of coal) the results have not been encouraging, mainly because of labor shortage and lack of essential stores and equipment. . . . Only these collieries (district of Chhindwara and Wardha) are electrified. . . ."

The average number of mine employees in Bombay and Central Provinces and Berar was 46,000 in 1943, the latest census available. In contrast to this figure, it will be noted that the cotton spinning and weaving mills in the area employed in the summer of 1947 318,000 persons.

The metal industry is second in importance and includes three firms, two of which are American, which assemble automobiles. A third plant is in the stage of erection and we have reason to assume that this is the new Tata automobile manufacturing plant.

The city of Bombay is a center of coastwise shipping, has warehousing facilities for general merchandise, for gasoline, etc., has all sorts of docks, and a completely up-to-date, extensive airport. It is also the terminal point for 10,000 miles of railroad, over 17,000 miles of hard-surfaced roads, and nearly 14,000 miles of the better type of unsurfaced roads.

MODERN FACILITIES

Banking facilities, advertising media, stock markets, and all other pertinent trading features are modern and at the disposal of the American manufacturer who wishes to establish an effective representation.

In conclusion, we wish to throw a sideglance on the present British-Indian trade to show how serious this market is being regarded by the United Kingdom.

The level of British exports to India in 1949 is expected to be maintained at the 1948 figure. Last year, India took almost one half of Britain's total machinery exports and headed the list in such items as textile machinery, electrical motors, machine tools, boilers, and electrical goods and apparatus. In the reverse flow, Britain will be assured of high priority in exports of tea, jute, manganese, and cotton.

Industry Exporters Study Problems Affecting Trade With 4 Foreign Markets

Hear Plans of India, Brazil For Utilizing Refrigeration

WASHINGTON, D. C.—Major suppliers of American refrigerating and air conditioning equipment to overseas markets held two days of round-table discussion of mutual problems with the diplomatic and trade mission representatives of Brazil, South Africa, India, and France here recently.

Sponsored by the Office of International Trade of the U. S. Department of Commerce, and assisted in planning by the foreign trade committee, of Air Conditioning & Refrigerating Machinery Association, the informal interchange of information and ideas furnished the foundation for future meetings.

SPECIALISTS ON HAND

Area specialists of both Department of State and the Department of Commerce attended to assist the conferees with current field reports as well as personal knowledge of the countries under review.

Major attention was given in each instance, particularly by the industry spokesmen, to the questions of the current and probable future availability of dollar exchange, both through ECA and normal trade channels. Import control restrictions by the several countries, and assurances which might be given for the protection of American capital invested abroad were also given major discussion.

In the discussion of India's refrigeration needs, the representatives of the Indian Government revealed extensive plans for the utilization of refrigeration in the social, industrial, and economic development of their country. Large-scale hydro-electric projects, both currently under construction and planned, would precede the installation of industrial and commercial refrigeration and air conditioning equipment in many parts of the country.

PROGRESS IN INDIA

Progress was reported as already having been made in improving road and rail transport facilities—these, with the power and irrigation projects, having a high priority in the planning of the Indian Government would be manufactured or assembled in India with American technological and other assistance.

There was a detailed review of Brazil's Sante Plan and the report of the Joint Brazilian-United States Technical Commission. These indicated a great need for both commercial and industrial refrigeration but, as was the case with both India and South Africa, the requirements for power and road and rail transport facilities are more urgent and carry a higher priority in the national planning.

"It was evident, as a result of the discussions, that, of the four countries reviewed, India offers the most immediate potential for the sale of American refrigeration equipment but that there, as well as in Brazil, South Africa, and France, increasing competition from European manufacturers, as well as from national manufacture or assembly, can be expected," ACRMA said.

OFFSETTING FACTORS

"The advantage possessed by American equipment in quality and performance is offset by the relative abundance of 'soft' currencies and the scarcity of United States dollars. The representatives of the several countries emphasized their governments' desire and plans for as much of the manufacture and servicing of refrigeration equipment as possible by their own nationals and with their own capital participation."

Discussion of the operation and progress of the European Recovery Plan was led by ECA representatives.

Companies represented at the conference were:

Baker Refrigeration Corp.; Carrier Corp.; Chrysler Corp.; Frick Co., Inc.; General Motors Overseas Corp.; International General Electric Co.; Nash-Kelvinator Corp.; Servel, Inc.; Westinghouse Electric International Co.; Wilson Refrigeration Co.; Worthington Pump and Machinery Corp.; York Corp.; and staff representatives of ACRMA.

Alert Sales Representatives—Efficient Service —AT YOUR REWA WHOLESALER

Often the difference between a wise purchase and a poor buy is the salesman who serves you.

Your REWA wholesaler has selected sales representatives who know and know well both products and problems. You'll find their cooperative, courteous service a plus factor in the selection and installation of parts and equipment.

And—if credit or adjustment becomes necessary—your account will be handled to your satisfaction, promptly and courteously.



Your Problems Receive Personal Attention
By Your REWA Wholesaler

180 MEMBERS
MAINTAINING
OVER 300
CONVENIENT
OUTLETS

H. S. McCloud, Executive Secretary

BUY FROM A



MEMBER

920 East McMillan St., Cincinnati 6, Ohio

The KEY to AIR CONDITIONING

One of a series from

by James J. LaSalvia

Readers who have any questions regarding the application of air conditioning are invited to write to Mr. LaSalvia, the author of this series, who will be pleased to furnish a complete and detailed answer free of charge. This is another of the services provided by the News.

Piping Refrigerant, Water, Steam (Cont.)

SUBCOOLERS

Subcoolers are used to prevent vaporization of gas in the liquid line.

In general where condenser is within 60 ft. of the evaporator and such evaporator is no more than 15 ft. above the condenser, no special precaution is necessary.

Special precaution must be taken under the following conditions:

1. When the liquid line is longer than 60 ft. in the horizontal and the evaporator is within 15 ft. above the condenser.
2. When the evaporator is more than 15 ft. above the condenser.

For the above conditions, some form of subcooling must be provided.

LONG, HORIZONTAL, LIQUID LINES

Long, horizontal, liquid lines with the evaporator no more than 15 ft. above condenser, especially when operating at low condensing pressures, will pick up heat from surrounding space and cause some of the liquid in the liquid line to evaporate.

By so doing, the pressure in the liquid line is lowered, and thereby the pressure at the expansion valve is also lowered, which means that the expansion valve will not open wide and will restrict the flow to the evaporator.

It also means that not all the refrigerant in the liquid line is liquid, which it should be, but partial liquid and gas, which also restricts the flow to the evaporator. This may prevent the air conditioner from cooling the space to the desired temperature. Subcooling must be provided in such cases.

Subcooling may be provided for these cases in two ways:

- a. By soldering the liquid to the suction line in the main run and insulating both lines together. This will keep the liquid in the liquid line from vaporizing and will also benefit the suction line, as it tends to evaporize any slugs of liquid which may be flowing in the suction line. This also may be applied to any liquid lines shorter than 60 ft.
- b. By subcoolers as shown in Fig. 10. Subcoolers should be used on all liquid lines over 75 ft. in length.

Subcoolers can be placed either in the horizontal or vertical position.

VERTICAL LIQUID LINES

With vertical liquid lines for evaporators higher than 15 ft. above condenser, subcoolers as shown in Figs. 10, 11, and 12, should be used.

All refrigerants have a temperature corresponding to pressure. Assume the condensing pressure at the condenser is 116.9 p.s.i.g., the corresponding temperature is 100° F. for "Freon-12." If this liquid is lifted

vertically 50 ft. to an evaporator, the static head or lift would be $50 \div 1.8$ (where 1.8 ft. = 1 lb. pressure) or 27.8 lbs. static head loss. The condensing pressure at the condenser, therefore, must be increased to 116.9 lbs. + 27.8 lbs. or 144.7 lbs.

Now if 5 lbs. is allowed for pressure loss in sizing the liquid line, then the pressure originally would have been 116.9 lbs. — 5 lbs. or 111.9 lbs. at the evaporator. So that we must deduct the same 5 lbs. from 144.7 lbs., the remainder is 139.7 lbs.

From 139.7 lbs. pressure the temperature is 111.8° F.

For 111.9 lbs. pressure the temperature is 97.2° F.

The liquid must be cooled from 111.8° to 97.2° F. or 14.6°.

In cooling the liquid down to 97.2° F., the pressure of 139.7 lbs. is not changed but remains at 139.7 lbs.

Therefore, we must keep the condensing pressure at the condenser at 144.7 lbs. pressure per square inch. The loss in the vertical lift and the normal pipe loss are used up in the travel to the evaporator expansion valve where the quality of the liquid in this case is 111.9 lbs. with a corresponding temperature of 97.2° F. entering the expansion valve.

The cooling of the liquid has to be accomplished by the subcooler.

SQUARE FEET OF SUBCOOLER SURFACE REQUIRED

The square feet of subcooler surface required can be found by the illustration of the following example.

EXAMPLE

Given: A normal system where the liquid line is less than 60 ft. and where the evaporator is less than 15 ft. above the condenser, with the following information:

Heat gain capacity = 210,000 B.t.u. per hour.

Condensing pressure = 132.5 lbs. gauge.

Evaporator temperature = 44° F. Suction temperature = 41° F. or 38 lbs.

Condensing water temperature = 80° F.

Quantity condensing water = 1,680 g.p.h.

If the evaporator was moved to a position 50 ft. above the condenser, what will be the square feet of subcooler surface required?

Condensing pressure of 132.5 lbs. = 108.2° F.

Allowing 5 lbs. for pressure loss in liquid line: 132.5 lbs. — 5 lbs. = 127.5 lbs.

The pressure of 127.5 lbs. = 105.6° F., which is the quality of the liquid which should enter the expansion valve at evaporator.

50 ft. — = 27.8 lbs. static head loss.

1.8 ft. —

132.5 lbs. + 27.8 lbs. = 160.3 lbs. condensing pressure at condenser.

160.3 lbs. — 5 lbs. = 155.3 lbs. which is equal to 119.2° F.

Therefore, the subcooling is 119.2° — 105.6° = 13.6° F.

Total B.t.u. = 210,000 B.t.u.

Total heat of refrigerant at evaporator temperature of 44° F. = 83.15 B.t.u.

Heat of the liquid at 127.5 lbs. = 32.55 B.t.u.

Pounds of refrigerant evaporated 210,000

= 4,150 lbs. per hr.

(83.15 — 32.55)

Heat of the liquid at 155.3 lbs. = 35.95 B.t.u.

The subcooling load = 4,150 lbs. x (35.95 — 32.55) = 14,110 B.t.u. per hour.

Water temperature rise passing through the subcooler =

14,110

= 1.0° F.

1,680 g.p.h. x 8.3

Therefore, the water temperature rises from 80° F. to 81.0° F. passing through the subcooler. The liquid is reduced in temperature from 119.2° F. to 105.6° F.

Refrigerant temperature in 119.2°

Water temperature out 81.0°

38.2°

Refrigerant temperature out 105.6°

Water temperature in 80.0°

25.6°

M.E.D. = 32.

A "K" factor or coefficient of heat

How Subcooler Is Employed for High Vertical Runs

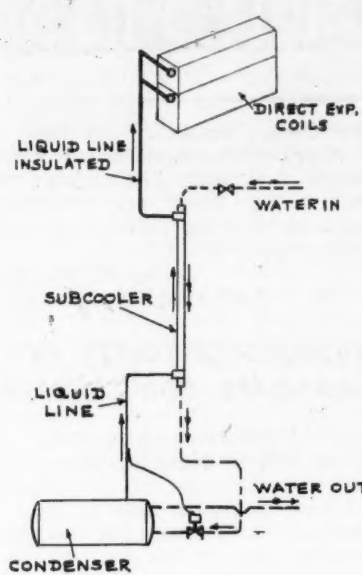


Fig. 11 shows a subcooler in a system employing city water as the condensing medium.

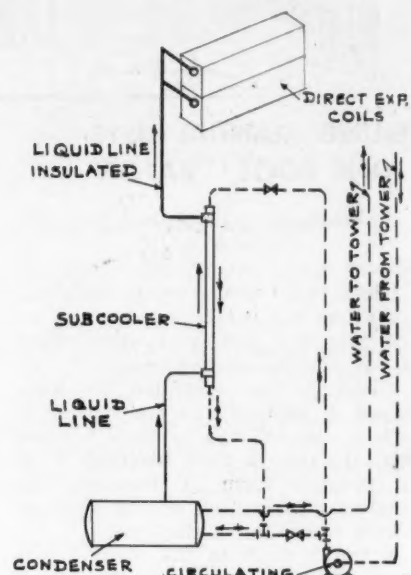


Fig. 12 shows how a subcooler is used in a system having a water-cooling tower.

transfer of surfaces must be used on bare copper tubing with liquid flowing both sides, the "K" factor is approximately 70 B.t.u. per sq. ft. per degree temperature difference.

The surface of the subcooler =

14,100 B.t.u.

32 x 70

Subcoolers as shown in Fig. 10 are made of double pipe, the water pipe inside of the refrigerant pipe. Special fittings are used which can be obtained in the industry. The outside or refrigerant piping is usually one

size larger than the inner water piping.

If the water piping in the above example is 1½ in. o.d., the refrigerant piping can be made of 2½ in. o.d.

In this case the circumference of the 1½-in. o.d. pipe is 5 in. or .4 of a foot. We require 6.3 sq. ft. so that

6.3 sq. ft.

.4

The subcooler in this case is 1½ in. x 2½ in. x 16 ft. long.

(To Be Continued)

it's new!
it's finer!
it's Carrier!

A TRAIL-BLAZING ROOM AIR CONDITIONER

DESIGNED TO OUTSELL ANY OTHER UNIT

Here's entirely new styling and engineering in a Room Air Conditioner — a handsomer, more efficient unit to do a better job for you as well as your customers.

Among its trail-blazing features are: more cooling per watt than any comparable unit... concealed 2-speed control... whisper-quiet operation... exhaust fan for stale air clearance... adjustable air louvers... hermetically sealed unit... 5-year warranty... and an attractive metal cabinet that will blend with any interior.

TWO NEW CARRIER LINES FOR YEAR-ROUND SALES

With its sensational new Room Air Conditioner and big new Food Freezer, Carrier offers a dual franchise that means year-round sales. Powerful advertising and promotion back this money-making idea. Write for details. Carrier Corporation, Syracuse, New York.



The New Carrier Food Freezer!

Designed to be a best seller — a roomy 15-cu.-ft. unit that freezes and stores up to 600 lbs., yet occupies less space than sprawling chest-type models. 5-year warranty. For larger families — a 2-door, 30-cu.-ft. model with 1200-lb. capacity.

Carrier

AIR CONDITIONING • REFRIGERATION • INDUSTRIAL HEATING

Subcooler Advisable for Long Liquid Line Runs

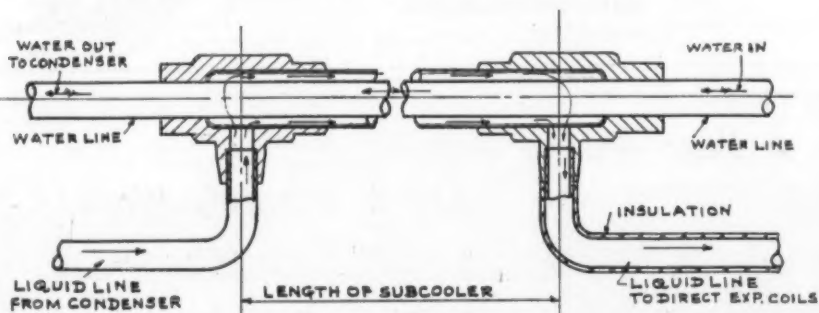


Fig. 10—On all horizontal liquid lines longer than 75 ft. or vertical runs above 15 ft. the liquid line should either be soldered to the suction line or fitted with a double-pipe subcooler as shown above to prevent vaporization of the liquid refrigerant.



OFF THE CHEST

SELLING MANUAL LISTS 'ONE FOOT,' 'BATON'

Westerlin & Campbell Co.
Chicago 1, Ill.

Editor:

I told you I would try to send you a copy of the sales manual that we had prepared and were distributing to our franchised accounts.

While I was gratified to have played a part in the conception of such a manual and to have worked with the group that brought it to its present form, I received the greatest pleasure out of our management's reception of the idea.

A rough draft of the manual was prepared by our sales district office . . . and . . . whipped into final shape . . . in 30 days.

I do not believe you will find any direct quotations from George

Taubeneck's books in our text, but no study of merchandising would be complete without mentioning "One Foot in the Door" and "The Marshal's Baton." We listed these in the bibliography.

F. B. FRAZEE,
Commercial Sales Engineer

WASHINGTON GIVES NO MANDATE FOR SOCIALISM

Virginia Smelting Co.
West Norfolk, Va.

Editor:

I have not been able to read the NEWS as I formerly did, but I am certainly glad I did not miss your editorial, "Cause For Alarm," in the Feb. 14 issue. I am very glad to see you writing of matters such as that covered in this editorial because I fully agree there was no mandate,

even on the part of a minority of the nation's voters who elected those now in Washington, to Socialize America. Somehow I believe everyone who can do anything at all should be working towards getting those in Washington to realize this. I hope you will continue to do what you can along these lines.

I believe that if enough of the minority who never intended to give any mandate were to write those in Washington stating two things, it would be of great help in preserving what has made America great. Those two things are, a definite statement "Mr. ——— I voted for you last fall, but Mr. ——— in voting for you I never intended or thought that you stood for, or were going to try to put over the things that apparently you state you intend to do."

In case you are not familiar with work that a southern organization, the Southern States Industrial Council, 1111 Stahlman building, Nashville, Tennessee has been and is doing, I think you would find much interest in contacting them.

CHAS. W. JOHNSTON,
Vice President

APPLIANCES MUST FIT CONDITIONS IN NORWAY

51 Forest Park
Portland, Maine

Editor:

Could you advise me as to who manufacturers a washing machine as follows:

220 volts, 50-cycle a.c. (for use in Norway). In view of the way they wash, shortage of hot water, etc., it should be the type which will bring cold water to boil and let it boil for a given time. Some machines require all night to do this, others do it in about one and a half hours. I have seen such machines in Norway but believe they were manufactured locally and, of course, none have been available since 1940.

The machine I have in mind would, of course, not be automatic, nor would one be able to rinse clothes in it easily. It is to be used in an apartment and should be movable and not require bolting to the floor.

Would you know of anyone in this country who makes such machines? And where can I get heating plate for Silex type coffee maker, refrigerator, in short a number of electric appliances, but 220 volt, 50-cycle a.c.? Sorry to trouble you with this. Since I came to this country I have been writing to the family about all the wonderful things and now they want some too!

MRS. ARTHUR J. PEDERSEN

EDITORIALS 'FIRE GUN' IN FREEZER SALES DRIVE

Norge Division
Detroit, Mich.

Editor:

Thank you very much for your letter of Feb. 22 and the 125 copies of the article "How to Sell Home and Farm Freezers When Snow is on the Ground." You can be assured that the effort and thought which you have put into these articles is being used in many ways through distributor, factory, and dealer organizations, to help educate salesmen and make them more conscious of the opportunity to sell freezers and at the same time give them working tools and ideas to improve their selling techniques on this particular appliance.

I can personally assure you that your articles get complete distribution throughout the states of Michigan, Indiana, Kentucky, Ohio, West Virginia, part of Pennsylvania, and part of New York state which comprises my territory with Norge.

I hope that you will continue to give us this helpful ammunition because I want to keep "firing the gun."

J. W. WEBSTER
Central Sales Manager

NEWS TRIBUTE TO SMALL BUSINESSMAN IS RELAYED

Jersey Distributors
Vineland, N. J.

Editor:

Thank you for your editorial in the Feb. 7 issue, in behalf of us "small businessmen," entitled "Overdue Medals."

We took the liberty of submitting your editorial to our local newspaper here, and as you will see from the attached tear sheet of the "Vineland Times Journal" of Feb. 17, 1949, the editor published it in his column.

BERNARD F. LIEBERMAN

WASHER PRICE SLASHING HURTS SELLING EFFORT

Nassau Appliance Shop, Inc.
146-02 Jamaica Ave.
Jamaica, N. Y.

Editor:

Here's the same old problem:

PAUL E. JAPPE, Pres.

copy of letter to:

Owen G. Nugent, V. P.,
Thor Corp.

Chicago 50, Ill.
Dear Mr. Nugent:

Thank you for your reply to our letter about the advertisement of a Thor Automagic at \$188.88 by the Times Square stores.

The phrase "floor model" is, as you know, nothing but an excuse to sell new machines at big reductions. We are certain that your shopping report will prove this.

This morning the writer talked to two people who have been offered Thor Automagic for \$180 delivered and installed. One was from a local dealer and the other from a N. Y. discount house.

Your system of dual distribution in N. Y. has resulted in the opening of far too many dealers to maintain the list price of Thor appliances.

The enclosed letter from Latham talks of properly instructing and training our Sales force. This is all very well but where is the commission coming from to pay this force when you have to sell at 20% off?

There is nothing so disheartening to a salesman as being told by a prospect that your washer can be purchased at 20% discount after the salesman has dug up the prospect, demonstrated the machine, and made day or night calls or both.

Is any effort going to be made to maintain your price? If not, there is not much use of pushing Thor products.

PAUL E. JAPPE,
President

INDUSTRY BOOKS WILL AID PALESTINE GROWTH

1605 Metropolitan Ave.
Bronx, New York

Editor:

I am a refrigeration engineer in Palestine and I am now visiting this country. I have been a reader and admirer of your publication for many years and I would greatly appreciate if you would publish the following:

I have had the opportunity to study the wonderful progress and developments of the air conditioning and refrigeration industries in your country and I expect to make a thorough report of what I learned to my professional colleagues.

In the last 10 years the demand for refrigeration equipment in Palestine increased considerably, as a result of which great progress was achieved in this field. During the war, despite the scarcity of material from abroad, we were still able to build cold storages for potato seeds and other food stuff and so contributed a great deal to the war effort.

As a result of the above there has been a large increase in the demand for trained refrigeration engineers. To meet this situation efforts were made to interest more young men in this field. Two years ago the Technion college of Haifa offered special courses in refrigeration and air conditioning to the upper grade students.

The lecturer is Dr. R. Landsberg, a well known expert in this field with experience in many countries such as Germany, Switzerland, and India. We also introduced refresher courses for refrigeration servicemen to keep them informed of the newest developments.

We find ourselves faced with a shortage of books and other printed material in these subjects. Therefore, I appeal to the readers of your paper to contribute old books, papers, and any other pertinent literature to help us attain our goal. At the same time our students familiarizing themselves with American equipment would become strong advocates of their products.

All contributions should be sent to Technion-Haifa, c/o Hebrew University in Palestine, 9 E. 89th St., New York.

GUSTAV SPERLING

DISTRIBUTOR SELLING PROVES DISRUPTING

Harris Appliances
326 N. Cottage Ave.
Connellsville, Pa.

Editor:

I have a squawk to make and I am wondering if other dealers find that this same condition exists in their territory.

I am a dealer and representative for Frigidaire Sales Corp. in Fayette county in Pennsylvania. I go out on bids and find that the distributors of other manufacturers are selling equipment to users at dealer cost.

Now I wonder if these manufacturers are proud of distributors who do these things? Do these same manufacturers think that the serviceman and dealer are going to boost their products?

Why can't they be salesmen and sell as a salesman should? Is the manufacturer so ashamed of his product that he must sell it cut-rate and then turn his back on his customer and say "To hell with him—I made the sale and saved him money now let him worry about the service?"

We do a tremendous amount of service work in this area and I have run into this situation time and time again. All I can say is "Thank God for companies like Frigidaire, who really go all out for their dealer, and for your weekly newspaper in which we can sound off occasionally about some of the illegitimate business which goes on in a really wonderful vocation.

EDWIN HARRIS

COMPANIES WOULD LIKE BOOKLET ON BUREAUCRACY

The Canton Hardware Co.
1221-1227 Third St., N. E.
Canton 2, Ohio

Editor:

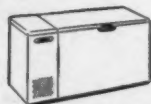
I have very much benefited by reading your recent articles about bureaucracy, etc. In my opinion these should be gathered together and published in a booklet.

I believe that such a booklet would be readily salable in big quantities.

I know that our small company would use some, and larger companies such as the Timken Roller Bearing Co. here would no doubt use a great many.

J. W. BROTHERS
Executive Officer

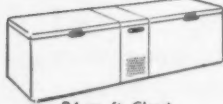
A line that's right to meet
1949 sales demands.



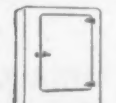
12 cu. ft. Chest



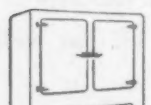
18 cu. ft. Chest



24 cu. ft. Chest



9 cu. ft. Upright



18 cu. ft. Upright

TOP QUALITY materials, construction, engineering, design—in a complete line you can sell!

COMPETITIVE PRICE—well below practically all other makes with comparable specifications.

OUTSTANDING FEATURES include Exclusive Center Plate Coil, Hermetically Sealed Compressor, Self-Balancing Lid, Pressure-Lock Hardware, Adjustable Dividers, Handy Freez-Basket, Temperature Indicator, Warning Signal, Recessed Base, 5 Year Warranty Plan. (Ice Cube Trays—optional.)

OUTSTANDING VALUE, more for your money, means bigger return on your sales efforts.

FULL LINE, both Chest and Upright models—sizes that sell, and offer adequate capacity.

SALES HELPS include effective literature, mailing pieces, stuffers, newspaper mats, dealer signs, and point-of-sale material to help you sell.

CONSISTENT NATIONAL ADVERTISING since 1945, influences the best prospects in your territory. The 1949 schedule includes Better Homes & Gardens, McCall's, Saturday Evening Post, Field & Stream, Country Gentleman, Farm Journal.

EXPERIENCED MANUFACTURER with over 20 years' background in the food refrigeration field. Tyler originated the welded-steel refrigerated Meat Display Case—has been a pioneer in home freezers.

FUTURE PROFITS
FOR YOU WITH—

HARDER-Freez
THE ECONOMICAL
HOME FREEZER

WRITE OR WIRE ABOUT DISTRIBUTORSHIPS—
DEALERSHIPS. YOUR TERRITORY MAY BE OPEN.
TYLER FIXTURE CORPORATION, DEPT. R-4 NILES, MICHIGAN



WATER FILTERS

remove CHLORINE TASTE
remove RUST AND DIRT

SELL A FILTRINE FILTER
WITH EVERY COOLER

A Few Choice Areas Open for Factory Representatives

FILTRINE MANUFACTURING CO., BROOKLYN 5, NEW YORK
"Water Coolers and Filters for 40 Years"



HEAT EXCHANGERS

Shell and Coil type for use with FREON and Methyl-Chloride—for installations 1/2 ton to 50-tons. Acme Heat Exchangers increase the capacity of all cooling systems.

ACME INDUSTRIES, INC.

Jackson, Michigan
Representatives in all principal cities

A Year Around Value— For A Minute's Work!!

Yes, Mr. Manufacturer, you get a full year's valuable listing in the Refrigeration & Air Conditioning Directory for only the few minutes time necessary to fill out our questionnaire.

The Directory is being compiled now, so return your questionnaire immediately to assure accurate listings—it's free.

REFRIGERATION & AIR CONDITIONING DIRECTORY
450 W. Fort St. Detroit 26, Michigan

ASRE Sets Up Committee To Establish Standards For Refrigerant Driers

NEW YORK CITY—A committee to set up rating and testing standards for desiccants has been established by the American Society of Refrigerating Engineers.

"To date, there is no accepted method for rating and testing the many desiccants or refrigerant driers which are marketed under many trade names," the society said. "Many purchasing agents as well as government buying departments have expressed the need for a uniform method of judging the drying efficacy of various desiccants."

The committee is now studying the many published articles and technical data available on desiccants and the chairman, W. O. Walker, Ansul Chemical Co., enlists further suggestions from engineers in the industry who are familiar with drying problems. Unpublished information is also requested, since it is felt that a great deal of such data exists in the files of the industry.

"The size of the task facing the committee clearly indicates that standards can be arrived at only after exhaustive study," ASRE pointed out. "Considerable experimental work will be necessary and for that reason participation of industrial and academic laboratories are requested."

In addition to Walker, the committee is made up of L. H. Bartlett, Louisiana State university; R. E. Cherne, consulting engineer, Rochester, N. Y.; W. A. Pennington, Carrier Corp.; W. F. Wischmeyer, Sporlan Valve Co.; R. L. Williams, Kinetic Chemicals, Inc.; and P. L. Veltman, Davison Chemical Co.

Inquiries and information may be addressed to ASRE headquarters, 40 W. 40th St., New York City 18.

Roofing Firm To Handle Air Conditioning Equipment

GREENWOOD, S. C.—Capitalized at \$10,000, Greenwood Roofing & Metal Works, Inc., has been organized here to engage in a contracting business and to handle air conditioning equipment. I. C. Mock is president.

First Completely Air Conditioned Plane Has 10-Ton System Made of Aluminum

SYRACUSE, N. Y.—The first completely air conditioned passenger plane using equipment similar to that in sizeable buildings, has been delivered by Boeing Aircraft Co. to Pan American World Airways, Carrier Corp. announced here recently.

The ship, a giant double-deck, pressurized Stratocruiser, capable of carrying up to 114 passengers, is a peace-time development of the famous B-29 Superfortress. It has a cruising range of 4,600 miles at a speed of more than 350 miles per hour.

The air conditioning system is entirely new in aviation history, Carrier officials said. Designed by Boeing air conditioning engineers, it maintains passenger comfort automatically, regardless of whether the outside temperature is 100° F., as on a landing field, or -65° F. in the stratosphere. It also controls humidity, air flow and air cleanliness.

Heart of the system is two Carrier aluminum compressors which operate a 10-ton "Freon" refrigerating system. Built especially for air transportation, they weigh only half as much as compressors of similar capacity made of the customary iron and steel construction.

Heretofore passenger planes have had only limited air conditioning through distribution of outside air drawn in and circulated by the plane's engines. Such systems are inadvisable at sub-zero altitudes, and do not work while the plane is on the ground, unless an engine is kept running. The new Stratocruiser system operates while the plane is stationary, by merely plugging into an electrical outlet.

The pre-cooled or pre-warmed air is circulated throughout the two decks of the plane through hundreds of feet of plastic ducts. Air flows into the cabin at the rate of 3,600 c.f.m. and is completely changed every 90 seconds.

If humidity is low, a psychrometer detects and corrects the dryness by turning a fine spray of water into the air recovery unit. Filters remove dust, dirt, and tobacco smoke color; activated charcoal removes odors.

The filters removing smoke color also remove a large percentage of air-borne bacteria, making cabin air

purer than in the average home.

Seventy-five per cent of the cabin air is cleaned and recirculated, while 25% is outside air, delivered by the engines' turbosuperchargers.

Window panes are double, with the cabin air passing between them, thus removing the frost and fog caused by the differences between inside and outside temperatures.

Routed between the lining and soundproofing blanket within the walls before entering the cabin, the heated or cooled air keeps walls and window areas at about body temperature. The passengers feel no drafts.

Because of the plane's huge size and the sub-zero temperatures of the stratosphere, it was decided to install a complete, independent, air conditioning system similar to those used in buildings on the ground. This has not been done before because of the weight factor. This has now been largely overcome.

Operating with the air conditioning system is the altitude-conditioning system of cabin pressurization, which permits the cabin to be maintained at approximately sea level atmospheric pressure at all altitudes from sea level to 15,000 ft.

At an actual altitude of 25,000 ft., the cabin is maintained at a comfortable 5,500 ft. Conditions of an 8,000-ft. altitude can be maintained when the plane is at 30,000 ft.

Boeing at present has 55 Stratocruisers on order by six domestic and foreign air lines, all of which will be completely air conditioned.

Remington Room Units Described In Booklet

CORTLAND, N. Y.—"The Weather You Want, When You Want It" a new booklet containing illustrations and brief technical descriptions of the various Remington room air conditioner models, has recently been published by the Remington air conditioning division, Remington Corp.

The advantages of room air conditioning, over central systems are explained, together with the various merits of both air-cooled and water-cooled models. A table shows the specific applications of room air conditioning in each season of the year.

Single copies of this booklet called "Bulletin G-2," are available free of charge from the company.

Mayor Foresees Cool Summer

TAMPA, Fla.—City representatives' finance committee approved a \$2,900 bid of Central Oil Co., to install air conditioning in the mayor's office.

UsAirco Appoints Oberc

MINNEAPOLIS—United States Air Conditioning Corp. has announced that J. M. Oberc, Inc. of Detroit has been appointed exclusive distributor for the company's line of packaged air conditioning units in southeastern Michigan.

New Owner To Improve, Expand Banner Line

MILWAUKEE—David V. Uihlein has acquired the Banner Mfg. Co., 4915 North 29th St. here, and will act in the capacity of executive director, it was announced recently.

Formerly known as Banner Products Co., the new organization plans to increase distribution and service on its line of Banner resistance welders and brazers.

The company's present program calls for new design changes and improvements in the Banner line, plus the addition of new products in the welding field.

26,000 SQUARE FEET OF STORE AND WAREHOUSE SPACE

The Supply House That Service Built



Everything you need in REFRIGERATION, AIR CONDITIONING, HEATING PARTS and SUPPLIES

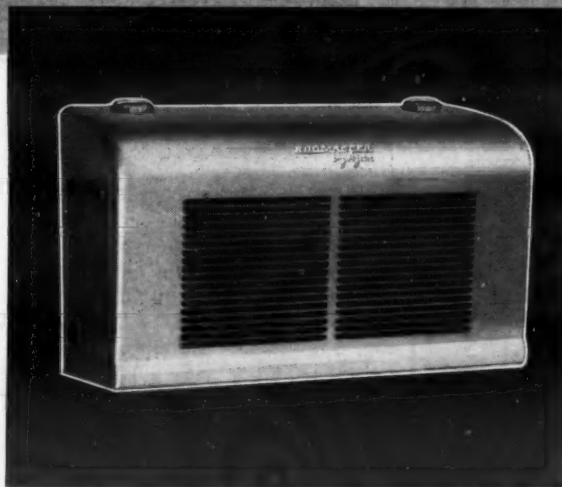
Save time and energy . . . order from our new catalog. Efficient same-day service, from men who know your business. Keep your stocks complete from our stocks. Wholesale only.

SERVICE SP PARTS CO.

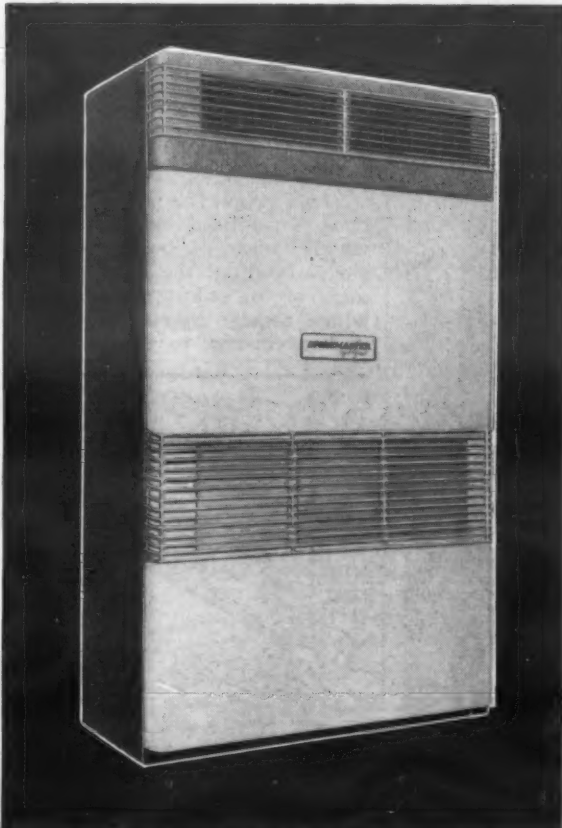
2511-2611 LAKE ST. MELROSE PARK, ILL.

New AJAX AIR CONDITIONERS

combine amazing *Beauty and Precision*



ROOMMASTER by Ajax



STOREMASTER by Ajax

● Ajax Corporation of America announces its two 1949 lines of air conditioners—the ROOMMASTER and the STOREMASTER—the BEST in air conditioning. These units are new, improved models, manufactured by one of America's leading manufacturers of air conditioning equipment. They are precision engineered for quality and performance.

The ROOMMASTER is available in 1/2 and 3/4-ton units. It is the most competitive unit price-wise on the market today. These beautiful, unobtrusive units are the ONLY room air conditioners available in a choice of 5 cooling colors or 3 smart wood finishes.

The STOREMASTER is available in 3, 5 and 7 1/2-ton units. It is designed to give efficient service in stores, restaurants, hotels, institutions and large offices.

The ROOMMASTER and STOREMASTER by Ajax will be sold only by authorized distributors—using a unique year round merchandising program. For further information and availability of distributorships write

AJAX CORPORATION
of AMERICA

176 WEST ADAMS STREET
CHICAGO, ILLINOIS

ROTARY SEAL



REPLACEMENT UNITS

For all makes and sizes of Commercial, Semi-Commercial, Air Conditioning, and Household Refrigerator Compressors. ROTARY SEAL Units are known throughout the world for . . . Simplicity in Construction . . . Ease of Installation . . . Efficiency of Operation . . . Economy. The original time-tested, precision-built replacements—18 years of service.

MORE THAN
848
MODELS



AT ALL
LEADING
JOBBERs

"Seal with

Certainty!"

2020 NORTH LARRABEE STREET
CHICAGO 14, ILLINOIS, U.S.A.
CANADIAN AGENT: 2025 ADDINGTON AVENUE
MONTREAL 28, QUEBEC, CANADA

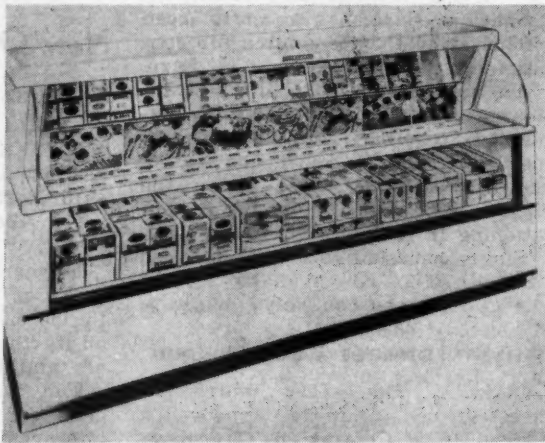
What's New

Husmann Adds 10-ft. Frozen Food Display Case

ST. LOUIS—Announcement that it is now in production on a new 10-ft. frozen food case has been made by Husmann Refrigeration, Inc.

The case's merchandise area, consisting of eight compartments, has two 16 $\frac{1}{2}$ -in. spaces for larger packages, such as pre-packaged frozen poultry and fish. The case is designed for remote installation of the condensing unit to permit increased capacity for merchandise display.

Designated model OLT-10R, the case can be lined up with Husmann's 7-ft. model OLT-7B (self-contained), and between these two models, flexible combina-



tions in lengths can be made up, the company pointed out in announcing product specifications.

Plug-In Cooler Fits Counter Top Dispensers



Atop this counter-type Coca-Cola case is mounted Drinkool's stainless steel refrigeration system.

CHICAGO—Development of a refrigeration system for counter top, fountain beverage dispensers has been announced by Drinkool, Inc. here.

The unit consists of a hermetically-sealed refrigeration system said to be adaptable for any existing type of counter top dispenser. The system fits on top of the dispenser and requires only the process of "plugging it in" for operation.

Standing 11 in. high, 11 in. in width, and 7 in. thick, the unit weighs 35 lbs. Housed in a stainless steel case with a top of polished cast aluminum, the system has appended beneath it a copper coil that dips into the dispenser for the cooling process. A $\frac{1}{10}$ -hp. motor is used.

Production of the refrigeration unit is already under way, with deliveries scheduled for the second quarter, according to R. S. McMahon, president. Distribution will be through recognized jobbers and distributors, he said.

3 Winpower Freezers Have One-Piece Chassis

NEWTON, Iowa — "Ever-Fresh" home freezers of 4, 8, and 16-cu. ft. capacities, reportedly holding 150, 300, and 600 lbs. of assorted foods, respectively, are now being produced by Winpower Mfg. Co. here.

The freezers have one-piece, welded steel chassis, according to the company. Cabinets are of heavy-gauge steel with $\frac{3}{8}$ -in. copper coils bonded to compartments. All copper joints are soldered with silver.

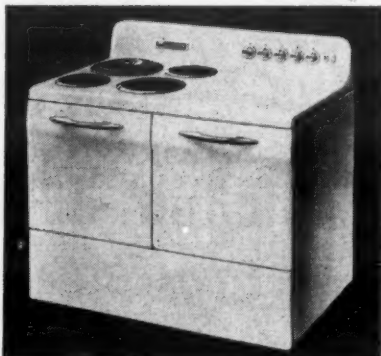
Outside finish is of baked white enamel and the interior is finished in aluminum. The freezers are insulated with $\frac{1}{2}$ in. of inorganic rock wool compressed for firmness, and they have Panelyte door seals with extruded rubber gaskets.

Other announced features of each freezer include Cutler-Hammer temperature control at rear near top, counter-balanced lid, automatic interior lighting, recessed base in black enamel, chrome-plated hardware (handle can be locked from outside), and Tecumseh hermetically-sealed compressor.

Models 4 and 8 are equipped with static cooled units of $\frac{1}{4}$ hp. and $\frac{1}{2}$ hp. respectively. Model 16 is powered by a $\frac{1}{4}$ -hp., fan-cooled unit. Outside dimensions of the models are, in order: 32 $\frac{1}{2}$ in. long, 25 $\frac{1}{2}$ in. wide, and 36 in. high; 51 $\frac{1}{4}$ in. long, 28 in. wide, and 36 in. high; 93 $\frac{1}{4}$ in. long, 28 in. wide, and 39 $\frac{1}{2}$ in. high.

A 64-page book on preparation and care of frozen foods, written by James D. Winter, is furnished with each freezer.

2 Gibson Ranges Feature Concealed Oven Vent



GREENVILLE, Mich.—Two new Gibson electric range models, designated as Model A and Model C, are now being offered to the trade, J. L. Johnson, general sales manager for Gibson Refrigerator Co., has announced.

Model A, with a retail list of \$179.95, has full-width, 40-in. table-top cooking surface with over 3 sq. ft. of work space, surface units which provide 7 "measured heats," and a 6-qt. deepwell cooker.

Emphasized by Gibson is the patented concealed oven vent which carries vapor from the oven to the right rear surface unit where it is dissipated.

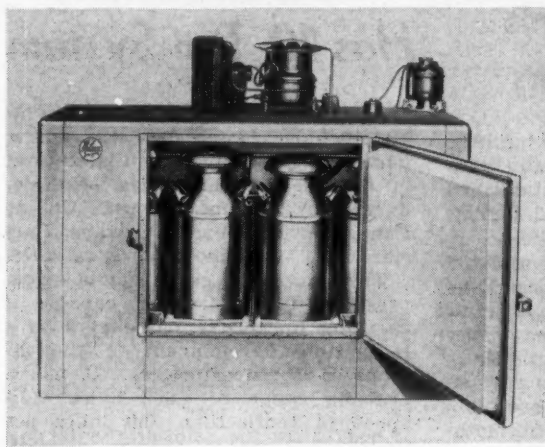
Both new models, have a high speed, "banquet-size" oven—16-in. by 16-in. by 20-in.

In addition to the features of Model A, Model C offers a combination lamp, clock, and Gibson "Minute Watchman." The Minute Watchman has a bell cooking-time signal.

Model C, which is priced at \$219.95, also has drawers providing more than 4 cu. ft. of storage capacity.

The new models are equipped with two 6-position reversible shelves which "may be positioned for properly broiling the thinnest cuts of meat or for baking or roasting foods which require maximum oven capacity," according to Gibson.

Icy Water Sprays Cans In Wilson Cooler



SMYRNA, Dela.—Wilson Refrigeration, Inc. here, announces the addition of a new, front-opening milk cooler in 4, 6, and 8-can capacities.

The new model incorporates the spray system, in which an automatic release of icy cold water sprayed over the milk can from the "neck line" down keeps the bacteria count at a minimum, the company said.

The easy "reach-in" convenience of the milk cooler is a prime feature Wilson intends to stress.

Electric Incinerator Uses Downdraft Principle



PITTSBURGH—A new electrical garbage incinerator with a patented downdraft principle has been introduced by the Electrocap Mold Co.

The new product, called Gar-Disposal, is claimed to dispose of all refuse from the home in an odorless, convenient, sanitary, and economical operation.

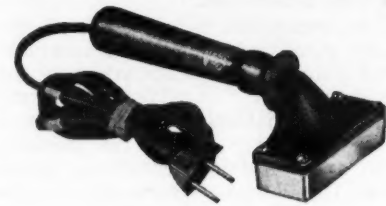
The unit is operated by drawing cold air from the floor up between the container and the outer jacket where it is warmed by heat from the heating element. Warm air then enters the container at the top through small holes, passing down through and around the garbage, carrying away moisture. Dry garbage is ignited and burned.

The resulting ash can then be removed and used as fertilizer, the company said.

The Gar-Disposal stands 32 $\frac{1}{4}$ in. high, 20 in. wide, and 20 in. deep. It weighs 140 lbs. and has a capacity of 1.5 bushels. It is finished in baked enamel in red, white, or green. It operates on 110-volt, a.c. current, 950-watts.

The Gar-Disposal is made in either electric or gas models. The electric model carries a list price of \$149.50. The bottled gas model lists at \$139.50 and the natural, mixed, or manufactured gas model at \$129.50.

The manufacturer is located at 115 E. Carson St., Pittsburgh.



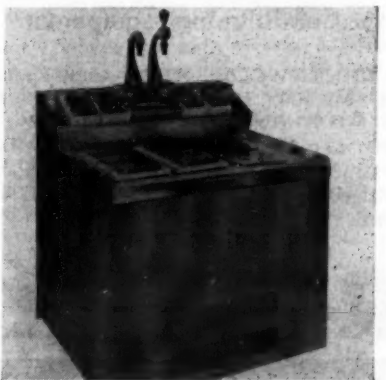
Controlled Heat Keeps Sealer from Scorching

SHELTON, Conn.—A new heat sealing unit for sealing frozen food and other type packages has been introduced by Seal, Inc. here.

The device, called the Thermo-Welder, is of all-aluminum construction and is thermostatically controlled to provide the correct temperature for sealing without burning or scorching, the manufacturer declared.

A wood handle and plastic disc protect the hands. An extra-long heavy-duty cord is provided that has a shockproof rubber plug.

The sealer uses 110 volt, a.c. current and consumes 45 watts. List price is \$4.75, the company said.



3-Ft. Long 'Jr.' Bobtail Has Refrigerating Unit

PHILADELPHIA—A new "Junior" size bobtail fountain, only 3 ft. long and containing its own refrigerating plant, is being offered by the Fischman Co. here.

The all-metal unit is recommended for installation in smaller stores, restaurants, and cafeterias, where space is at a premium. It has been designed for installation within a counter, in combination with ice cream cabinet, workboard, sandwich unit, or steam table.

Fischman is also offering a selection of special counters, for use with this and their four other bobtail units.

The Junior features four syrup jars and pumps; water and soda draft arms; a refrigerated storage compartment; six crushed fruit jars; accessible temperature control adjustment; and other fountain accessories.

Today's REFRIGERATION IS BEING SOLD

Yesterday's warmed over ideas won't drop sales in YOUR lap... just because you have a lap. You've got to go and get it.

To proceed to get... you'll need big news about new and modern refrigeration... geared functionally... Torvic's way... sales styled and priced right.

Over here in Hagerstown we're welcoming distributors and dealers who understand today's selling.

If you feel the 1949 way, write, 'phone or telegraph for prompt details of the Torvic rewards for 1949.

DISPLAY CABINETS - MILK COOLERS
BEVERAGE COOLERS - WALK-INS
QUICKFREEZERS - ICE MAKERS

VICTOR
PRODUCTS CORPORATION

HAGERSTOWN, MARYLAND



Ranco Inc.
COLUMBUS 1, OHIO



World's Largest Manufacturers of REFRIGERATION CONTROLS

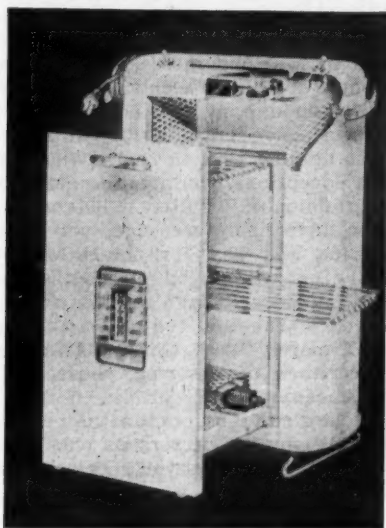
The enviable reputation for trouble-free performance enjoyed by Ranco Refrigeration Controls is the result of 20 years of refrigeration engineering experience and sound craftsmanship. Whatever your requirements—commercial or domestic, general or exact replacements—there's a Ranco Control designed for the job. Your Ranco wholesaler will be pleased to work with you in selecting the right control for every application.

RELY ON RANCO

Specialists In Refrigeration
Leaders In Design Development
For Over 20 Years
Dependably Accurate and
Trouble-Free
Greater Customer Satisfaction
More Profit for You

*Ranco Refrigeration Controls are found in more original installations than any other control.

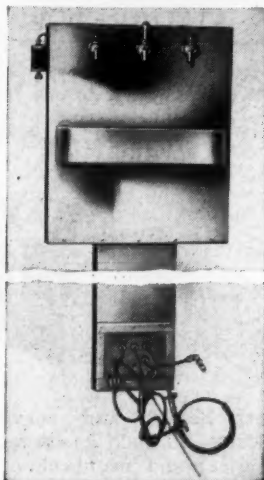
What's New (Con't)



Water-Cooled Steel Boot Chills Beer for Serving

ERIE, Pa.—A new electric beer dispensing system known as "Mels Cold-Tap" is now being manufactured and marketed by C. & G. Mfg. Co., 647 E. 10th St., Erie.

The system cools beer in a water cooled steel boot located between the



Electric Clothes Drier Can Dry Load In 1-Hr. or Less

DALLAS, Tex.—A new electric clothes drier that is claimed to be able to completely dry 3½ to 5 lbs. of clothes in from 30 to 60 minutes has been introduced by the Dri-Temp division, Wissman Products Co., 3005 Elm St. here.

The drier, called the Dri-Temp, dries by drawing cold, unsaturated air from the floor up through the unit where the air is heated by a 1,000-watt, fin-type, heating element and, in its expanded state absorbs the moisture from the clothes, Nat Wissman explained.

Clothes are suspended from 10-rod steel racks inside the drier. One rack is at the top of the cabinet and the other extends across the center. The lower rack can be removed, if desired, and placed along with the rods on the top rack to allow more hanging space, Wissman asserted.

An 8-watt germicidal lamp is located under the top front portion of the cabinet, shielded to prevent direct rays from entering the user's eyes. The lamp can be operated independently from a bat switch on top of the cabinet, if desired, for sterilization purposes.

The cabinet is constructed of 24-gauge steel plate and measures 9 in. deep, 24 in. wide, and 37¼ in. high. Shipping weight is approximately 30 lbs.

A door is located in the side of the unit that opens outward and downward thereby drawing the clothes rack assembly out with it so that the racks may be loaded or unloaded conveniently. When opened, the door rests on rubber grommets that sit on the floor.

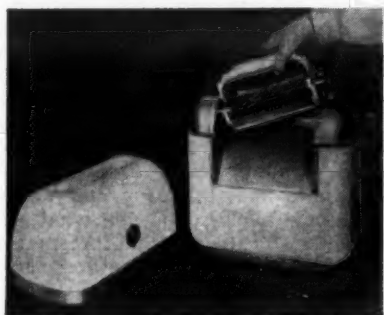
When clothes are loaded the door moves upward to close and when closed remains in a secure position.

The base of the cabinet is equipped with two plastic ball bearing rollers of the swivel type at one end. The other end has a stationary support.

The Dri-Temp carries a list price of \$69.50, f.o.b. Ft. Scott, Kansas and is warranted by Dri-Temp.

beer kegs and the tap box. An adjustable temperature control at the tap box is said to keep beer within 1° of any selected serving temperature and permit three or more serving faucets in any combination of beer, water, and soda.

Including tap box, the complete unit is stainless steel covered with all galvanized steel inner water tank. Pure block tin beer leads and heavy ½-in. copper cooling coils are other features. Approximate shipping weight is 175 lbs.



Lift-out Unit on Tenderator Speeds Knife Cleaning

NEEDHAM HEIGHTS, Mass.—Main feature of the new model L "Tenderator" now being manufactured by Cube Steak Machine Co. here is a lift-out unit, according to the company.

This unit of the Tenderator, which knits and shapes meat as well as tenderizing it, is said to permit instant removal of knife assemblies and stripping plates, "cutting the cleaning time greatly."

An automatic knife cleaning process which goes on while the unit is in operation is another feature.

Static Condensers Used On 3 Kelvinator Models



COLUMBUS, Ohio—Three new Kelvinator electric water coolers powered by Polarsphere static condensing units and two other large capacity coolers, all featuring a "Kelvin gray" finish, were announced recently by H. C. Patterson, Kelvinator commercial sales manager.

The three units with the static condensing unit are the PE-5, a 5-gal. pressure cooler; the BE-2, a re-styled bottle water cooler; and the BE-R, a treble-duty cooler that simultaneously cools water, freezes ice cubes, and cools a cold storage compartment.

A 10-gal. pressure cooler, the

model PE-10, and a 20-gal. pressure cooler PE-20, complete the 1949 Kelvinator line. The PE-20 is equipped with one glass filler and one bubbler. It is also available for 115 or 230-volt d.c. or 25-cycle current.

All of the 1949 Kelvinator pressure bubbler coolers are equipped with a new pre-cooler that meets all plumbing and safety codes.

Constructed entirely of brass and copper, this pre-cooler has a double wall of metal, separating the drinking water from the waste water.

All of the new 1949 Kelvinator water coolers are approved by Underwriter's Laboratory.

Complete details on all the Kelvinator water coolers can be obtained by writing to DEPT. PR, Kelvinator Water Coolers, Columbus 8, Ohio.



American Machine's Trak-Truck.

Trak-Truck Carries Bulky Loads Up Stairs, Curbs

RACINE, Wis.—A hand truck equipped with a 31-in. long track so that it can easily negotiate stairs, curbs, ramps, or rough terrain while loaded with bulky objects such as refrigerators or washers is being introduced nationally by American Machine Works, Inc. 1320 Clark St. here.

The Trak-Truck, or Rafn stair and utility truck, as it is called, operates normally as a two-wheeled truck, but, when needed can be converted into a four-wheeled tracked vehicle in 10 seconds, according to the distributor.

When not in use, the tracked base folds up against the rear of the supporting frame, which is of tubular welded steel construction. In this

closed position, the truck measures only 7½ in. from the front of the frame to the rear of the tread.

For use, the base is unlocked and swung to the ground. A lock on the pivoted caterpillar tread allows the swing at any angle in the opened position. This aids in stair wells, landings, and other tight places.

The aluminum wheels are equipped with needle bearings and an expansion type brake that will hold or retard the load as desired. The rubber tread prevents the metal wheels from touching the floor or stairs thus avoiding marks and scratches.

The trucks have a width of 24 in. and a height of 55½ in. Height however, is optional and can be made to conform to customers specifications.

The unit is priced at \$87.50, including one strap, f.o.b. Racine. Extra straps, 12 ft. 4 in. long, are available at \$2.75. A pad is sold at \$5.50.

NEW
UNITED
FREEZER

NEW THERMO-GUIDE
TEMPERATURE
INDICATOR.

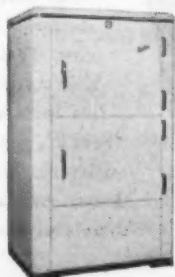
NEW "FOOD
COMPARTMENT
FINISH"...ACID,
GREASE, CHIP
RESISTANT.

NEW
ALL STEEL
WELDED
CONSTRUCTION.

NEW
DUAL COMPARTMENT
—DUAL DOOR DESIGN FOR
MAXIMUM ECONOMY!

"BALANCED FREEZING"

WITH THE
New *United* UP RIGHT FREEZER



15 cu. ft. Model UF15

BALANCED FREEZING. Scientific placement of cooling coils, more than adequate extra heavy insulation, two separate food compartments, dual doors (to minimize cold loss)—combine to insure balanced freezing at minimum cost.

5-YEAR WARRANTY PLAN. All freezers are equipped with dependable hermetically sealed condensing units which are covered by United's "5-Year Warranty Plan".

GENUINE BEAUTY. The new all steel welded United Freezer finished in gleaming white du Pont Dulux baked enamel, chrome trim and rounded corners is truly a beautiful fixture in any establishment.

QUALITY THROUGHOUT. The United 15 cubic foot freezer has the new white du Pont "food compartment finish" to assure a lasting abrasion, acid, grease and chip resistant life.

DESIGNED, ENGINEERED AND MANUFACTURED—HUDSON, WISCONSIN

UNITED REFRIGERATOR COMPANY • Hudson, Wisconsin

\$855 minus \$494 equals \$361

Yes, \$361.00 . . . that's the gross profit you can make on the sale of just one Remington 12W Climate Controller . . . the new 1½ hp. Room Air Conditioner with a cooling power of 1¼ tons.

It's one of six models from ½ to 1¾ hp. that make Remington the most complete and most salable line of Room Air Conditioners on the market.

Sold direct to installing distributors, giving you the top profit. Send now for Booklet G-2.

REMINGTON
Air Conditioning Division
CORTLAND, NEW YORK



Conjure House is dedicated to a relatively simple idea—but one that has important meaning everywhere books are read. It is the publication of books to please a reading, thinking clientele of thoughtful folk who are receptive to different books.



ONE FOOT IN THE DOOR

by GEORGE F. TAUBENECK

Author of "Let's Go to Australia," etc.

The first humorous book on merchandising. You will laugh—learn—profit while you relax with this popular book for businessmen. 400 entertaining, laugh-provoking pages. Immensely enjoyable, as thousands of readers will testify. A best-selling business book. **\$3.00**



It Happened in Detroit

Over 200 stories, anecdotes and heartwarming vignettes of everyday happenings in the lives of the friendly, real folks who make up the real Detroit—told by this master story-teller in his inimitable manner. Pleasant, easy reading for anyone anywhere. **\$2.50**

H. C. L. JACKSON
Dean of Detroit columnists



ALFRED STREET

by RUSSELL McLAUCHLIN

Noted music and drama critic, journalist

Delightful and nostalgic reminiscences of a boyhood in kindlier times, which will conjure up familiar scenes and rich experiences of your youthful days along the "Alfred Street" of your home town. Beautifully printed and illustrated in two colors. A gift anyone will treasure. **\$2.50**

A Conjure House Two-Story Book by Wanda Cheyne

NECTAR and OOLIE



NECTAR
the Giraffe

Here is a beautiful five-color children's book with delightful stories and pictures all children from 2 to 7 will love! Printed on heavy paper . . . expensively bound to withstand the hard, strenuous usage of children at play. An ideal present for a child. Only **50c**



OOLIE the Owl



England Under G.I.'s Reign

by WILLIAM A. BOSTICK

Ex-G.I., author and outstanding artist

Over 150 delightful "on the spot" pen-and-ink drawings—each one supplemented by the author's own amusing commentary. Foreword by John Mason Brown. Every ex-G.I. and anyone who has been to England will especially enjoy this book. **\$2.00**

ORDER TODAY . . . USE THIS COUPON!

PLEASE SEND ME THE FOLLOWING:

..... Copies of "One Foot in the Door" copies of "It Happened in Detroit" copies of "Alfred Street" copies of "Nectar and Oolie" copies of "England Under G.I.'s Reign"

☐ Check enclosed ☐ Please bill me

NAME

FIRM

ADDRESS

conjure house

BOOK DIVISION OF BUSINESS NEWS PUBLISHING CO.

450 WEST FORT ST.
DETROIT 26, MICH.

TELLING and SELLING

A GUIDE TO SMART ADVERTISING AND MERCHANDISING PRACTICES

This series of articles comprising ideas and principles for the small retail or manufacturing business is written by James D. Woolf, who was for more than 20 years a vice president and director of J. Walter Thompson Co., one of the largest advertising agencies. Out of his experience embracing all types of advertising and merchandising he brings his counsel to the small businessman who must plan his own advertising and promotional efforts.

By James D. Woolf

Should You Use Radio?

Questions about radio advertising have come to me from a considerable number of my readers. Should they use it instead of newspapers, for example, how should they use it, etc.?

Four kinds of media are generally used by local advertisers—newspapers, direct mail, radio, and outdoor. Whether you use one of them, two of them, three of them, or all of them depends on what you have to sell and the nature of your selling problem.

Each medium lays claim to certain virtues. One medium will do this or that for you, another something else. With particular reference to radio, let's consider the problem of media as it relates to your business.

SELLING THROUGH THE EAR

It is important to bear in mind that radio is an auditory medium. (Television is still in its infancy as far as most small local advertisers are concerned.)

If the appearance of what you have to sell—a beautiful bedroom set, a selection of smart new styles in shoes, a striking new motor car, or some distinctive patterns in chinaware—is important, then it is likely that radio will not produce the same direct and immediate results you will likely secure from a newspaper advertisement or an illustrated mailing piece. In many lines of business, pictures do sell merchandise (ask Mr. Sears or Mr. Ward or Marshall Field).

In many other instances, pictures are not too important—for example, in the advertising of beer and other beverages, bakeries, laundries, and drycleaners, cold storage operators, transfer and storage companies, taxicab companies, banks, insurance

STATION WOW



agencies, hotels, and services of many kinds. In such cases radio can be a logical and profitable medium.

In instances where it is important for the prospect to remember detailed information, radio is not at its best.

For example, it is today common practice for grocers and druggists to run newspaper advertisements—frequently full pages or half-pages—that feature and quote prices on a hundred or more items. Housewives tear out these price lists and refer to them as they shop. For this type of selling radio is handicapped.

And I don't think radio would pay as the primary medium for a successful real estate promoter I know. He uses direct mail—letters, brochures, folders, etc.—with outstanding results. Each mailing piece he sends out is crammed with information. His houses are described room by room with hundreds of words of copy, down to the last door knob, and photographs are used profusely.

He employs radio, too—a daily 15-minute musical program—as institutional background, but what sells his houses is the detailed information he mails out to long lists of prospects.

THE NUMBER ONE QUESTION

With direct mail, newspaper, and outdoor advertising your messages are aimed to ready-made groups of "spectators." Every day large numbers of persons open their mail, read their daily papers, observe signs and posters along streets and highways.

If your selling message is striking enough, it will be seen; if it is interesting enough, it will be read; if it is persuasive enough, it will sell.

As against this, in radio, with certain exceptions, you must create your own audience. To attract listeners of your advertising message, you must provide and pay for entertainment.

In other words, you must build your own audience. That's the system, the way it works, and I'm not criticizing it. I merely want to emphasize the importance of assuring yourself an audience.

If you can't be certain that a reasonable number of persons will listen to your broadcast, you'd better stay off the air.

Your audience will likely be small if your entertainment is opposite a popular show such as Jack Benny's. Your listeners will be whittled down if you try to compete with the "soap operas," which are listened to, I am told, by about half the housewives in America.

Your audience will not be large if your broadcast is distinctly second-rate—either because you cannot afford a good show, or because first-rate talent is not available in your community.

If, unhappily, your broadcast turns out to be really dreadful, as are many radio shows, national as well



as local, your program is not likely to build good will and prestige for your business.

"SPOTS" MAY BE THE ANSWER

One of the most useful forms of radio advertising for the local businessman is the "spot," a few seconds of "sell" immediately following the sign-off of somebody else's broadcast.

The merit of this device depends entirely on the popularity of the show it follows—or immediately precedes. If a national broadcast has a rating of, say, 18, and I don't know how many millions of listeners, the chances are good that the show has a local rating of 18—which means a lot of people in your community will hear your "spots."

As against this, if you are tagging along with second-rate shows, or worse, your audience will be meager.

RADIO NOT SELECTIVE

It is well to remember that radio advertising is not selective. If your merchandise or your service appeals to such restricted groups that blanket coverage is not an advantage, radio is probably not for you.

If, for example, you are a dealer in typewriters and other office machines, a direct mail solicitation to the business houses of your community will give you more for your advertising dollar than radio. It is likely that not one radio listener out of several thousand will be in the market for an adding machine or an Addressograph.

I like radio for many products and services. But it must be used intelligently.

IN ALBION THERE'S AN EASIER WAY!

Design is no problem to USP engineers. They're specialists in the design and manufacture of better shelving, at lower finished cost. Their years of experience plus USP's streamlined production facilities form a combination that can't be beat . . . regardless of quantity, shape or delivery. Simplify your shelving problems, standardize on USP. In Albion, there's an easier way, with results that pay.



UNION STEEL PRODUCTS COMPANY

Wire Products Division

ALBION • MICHIGAN

Electrimatic

Valves, Driers, Strainers, Charging Lines, Quick Couplers, Forged Flare Nuts and Fittings

Ask Your Wholesaler

Electrimatic

2100 Indiana Ave. • Chicago 18, Illinois
Canada—2025 Addington Ave., Montreal

What Dealer Needs To Set Up, Operate Service Shop

PHILADELPHIA—A new booklet for radio and appliance dealers on how to set up and operate a profitable servicing department has been published recently by Philco Corp., James M. Skinner, Jr., vice president—service and parts, has announced.

The Philco brochure entitled, "Lemons Make The Best Lemonade," provides suggestions on how to set up a service department, including illustrations of efficient layouts for handling radio-television, refrigerator, and other appliance servicing.

Advice is given on the size of operation relative to annual dollar volume; selection and training of personnel; test equipment needs and service manuals; service business records for proper accounting; and advertising to build service volume.

The 36-page booklet points out that with proper accounting and advertising, the service department pays servicemen's salaries and the store rent for many dealers.

As an aid to sales, a good service department is a constant source of new prospects for appliance sales, assures customer satisfaction and builds repeat business and word-of-mouth advertising for the dealer, as well as floor traffic resulting in sales of replacement parts, accessories and other appliances, Skinner said.

A dealer's service department can check outgoing merchandise, eliminating later calls; and in-warranty service is generally handled most economically and quickly by a dealer's own department, he added. Time payment purchasers pay more promptly when service is good.

As an aid to setting up a refrigeration and air conditioning service shop, the booklet provides a list of equipment that can be obtained from any hardware supply house. The list follows:

Tubing cutter with reaming blade.

Woman Operator Reopens Service Firm In Florida

ST. PETERSBURG, Fla.—The only woman operator of a radio repair and household appliance business in this city decided she made a mistake when she sold out her establishment at 928 Fourth St. North some five years ago.

Recently, she re-leased the same location and opened Mildred's Radio Sales & Service. In addition to repairing home radios, the firm handles Kelvinator refrigerators and ranges and Maytag washing machines. The repair of automobile radios will also be taken on soon.

Proprietor of the store is Mrs. Mildred Turesi, wife of a former marine recruiting sergeant, Henry F. Turesi. Mrs. Turesi came here in 1925 from Tallahassee and opened her first store in 1940 under the name of Mildred Wadford, Radio and Electronics.

Flaring tool (tube clamp and flare compressor), $\frac{3}{16}$ in., $\frac{1}{4}$ in., $\frac{5}{16}$ in., $\frac{3}{8}$ in., $\frac{7}{16}$ in., and $\frac{1}{2}$ in.

Steel hack-saw frame. 12 hack-saw blades (32 teeth per in.).

Double offset Duoflex box-wrench set. $\frac{1}{4}$ -in. ratchet wrench (for opening stop valves). 10-in. adjustable end wrench. 12-in. pipe wrench.

6-in. combination pliers.

Set of Allen wrenches (for socket head set screws).

Set of socket wrenches with ratchet handle and extension.

Small screwdriver (straight blade—3-in. shank). Medium screwdriver (straight blade—6-in. shank). Offset screwdriver. Set of assorted sizes of Phillips screwdrivers.

6-ft. folding rule or tape.

6-in. spirit level.

Flywheel puller.

Small electric drill. Assortment of steel twist drills.

Suction pressure "Freon" gauge with reset (30 in. to 100 lbs. pres.).

Condensing pressure "Freon" gauge with reset (0 to 300 lbs. pres.).

Gauge adapters (to fit above gauges).

Charging connection ($\frac{3}{8}$ -in. tubing, 4 ft. long with $\frac{3}{8}$ -in. flare nuts).

50-lb. suspension weighing scale. Pocket-type sling psychrometer.

Package of extra wicks.

Two thermometers with cases. Two thermometer holders.

1-lb. spool of sil-fos solder. Sil-fos soldering flux.

Small oil can (6-oz. capacity).

5-in-1 soldering outfit, "Prestolite."

Halide torch leak detector.

MC portable acetylene tank, "Prestolite."

Ball peen hammer (12 oz.).

Metal tool box, 14 in. x 6 $\frac{1}{2}$ in. x 6 in.

Electric bench grinder with wire brush wheels.

Vise.

Refrigerant dollies.

Quilted refrigerator covers.

Portable paint spray outfit with standard spray gun and touch-up gun.

Vacuum pump—improved by using old air conditioner compressor and $\frac{1}{4}$ -hp. motor.

Cabinet refinishing material for both wood and metal air conditioner cabinets and refrigerators.

Volt-wattmeter.

5-gal. can of cleaning solvent.

1 gal. SAE #10 oil.

Complete set of refrigerator and air conditioner service manuals.

Gulmite wrench #8.

Small portable spot welder (similar to Model M. S. W. made by Miller Electric Mfg. Co., Appleton, Wis.). Spot welder is recommended for larger shops.

The two-color booklet is available from Philco wholesale distributors throughout the United States, the company said.

J. A. Bell Heads Launderall Distributor Merchandising

DETROIT—Appointment of James A. (Art) Bell as director of distribution in the appliance division of F. L. Jacobs Co., was announced recently by Gerald Hulett, director of sales.

He will be in charge of merchandising activities of the Launderall distributor organization.

Bell is widely known in the utility and distributor appliance sales field where he specialized in ranges and water heaters. Before joining the Jacobs firm, he had been with Electromaster, Inc., since 1935, where he served as director of utility sales. Prior to that, he was general sales manager of the natural gas division, Kansas Power & Light Co., at Salina, Kan.

Wruble Is Mgr. of Appliance Dept. for Franks Dry Goods

FORT WAYNE, Ind.—T. S. (Terry) Wruble has been appointed manager of the large appliance department of the Franks Dry Goods Co., 730 S. Calhoun St. here.

Prior to coming to Fort Wayne, he served as Philco territory manager for the Radio Equipment Co. in Indianapolis, and for 15 years was division manager of Indiana for the Premier Vacuum Cleaner Co., and in charge of the Great Lakes territory of the Premier division of General Electric Co.

He succeeds Keith D. Nelson, who recently resigned to accept a similar position with a Lansing, Mich. firm.

Production Schedule on New Automatic Washer Is Doubled by Hotpoint

CHICAGO—Hotpoint, Inc., has doubled scheduled production of its recently-introduced automatic washing machine, reports James J. Nance, president.

The production increase is made now "to meet strong consumer demand following special showings in key cities throughout the country" and will bring operations to a 2,000 weekly rate, Nance said.

He declared that although the industry has returned to the normal seasonal sales pattern, Hotpoint does not have excessive inventories at any of its plants. Production and sales for the first two months of 1949, he reported, were the highest in the company's history.

"The appliance industry is now undergoing the adjustments incidental to the transition from an economy of scarcity to one of full supply which is causing those manufacturers in the industry, who are not burdened with excessive inventories of last year's models, to schedule their production with shorter term plans than ordinarily," he stated.

"An example of this rapidly changing pattern is seen in a partial shut-down of an assembly line in our water heater plant to make model change-overs resulting from new market conditions."

The company's range plant is now in full operation, producing a push-button range, a full-size standard switch control model to sell for \$179.95, and three deluxe ranges.

Dealer Advertises Rental Of '49 Refrigerator at 25 Cents Per Day

LOS ANGELES—Rental of a new 1949 refrigerator at 25 cents per day with no down payment was offered in a recent advertisement run in the Los Angeles Times by Elster's here.

The advertisement said: "Elster's can end your refrigeration troubles today. Save food—Save money—Save time—Save labor—cleaner, healthier because now you can rent a beautiful brand new 1949 Philco refrigerator for only 25 cents per day."

"No red tape—No down payment (Just a small delivery and pickup charge). Immediate delivery."

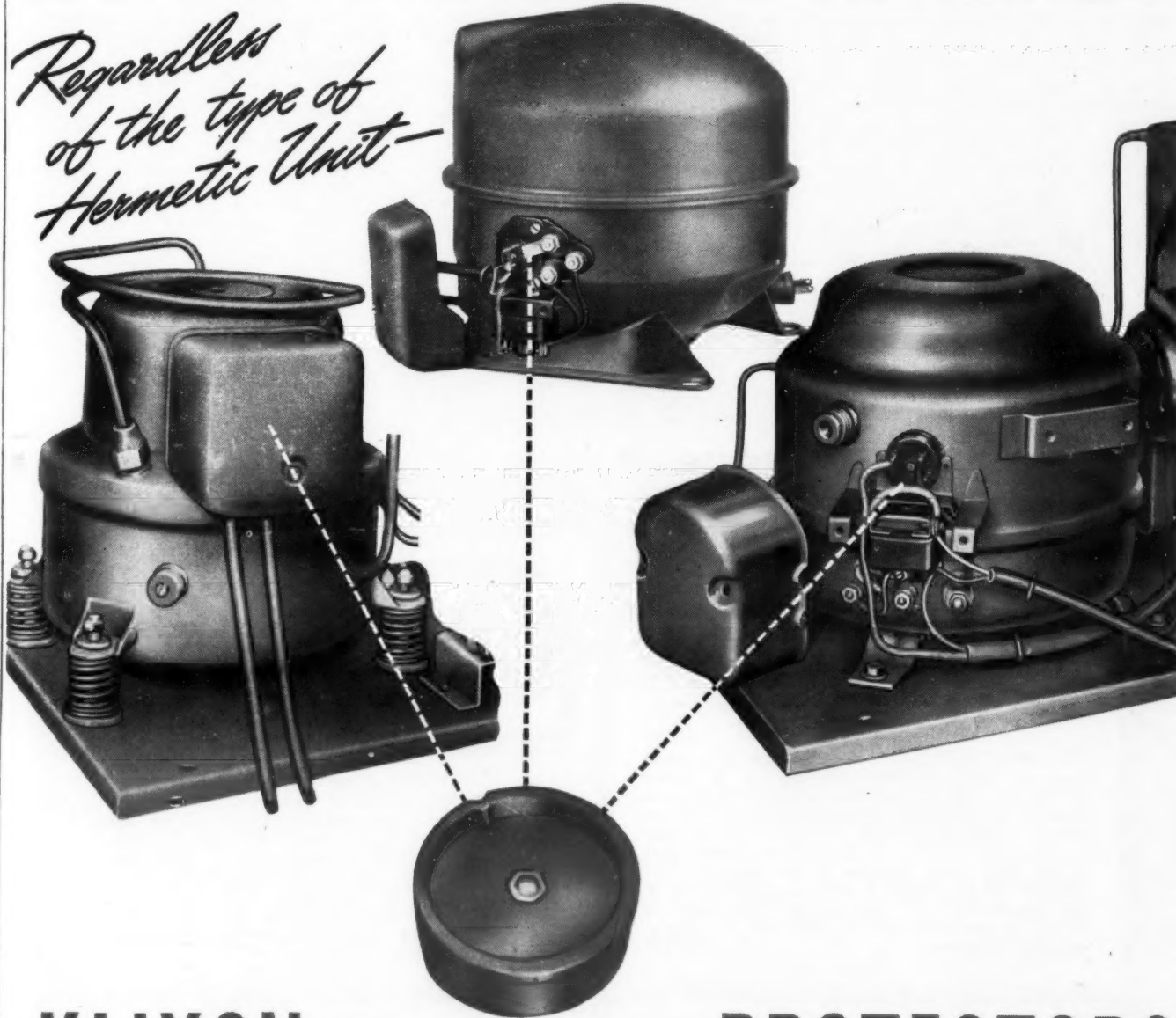
Under a picture of a woman depositing a coin in a meter was the statement, "Just deposit 25 cents per day in meter shown above installed for your convenience."

Another illustration portrayed the model 892 Philco household refrigerator.

Nancy Johnson Gets Home Ec Post with Westinghouse Corp.

MANSFIELD, Ohio—Appointment of Miss Nancy Ellen Johnson as central regional director of the Westinghouse home economics institute has been announced by J. E. Hugo, central manager of the electrical appliance division.

Miss Johnson will handle public mass demonstrations and cooking schools.

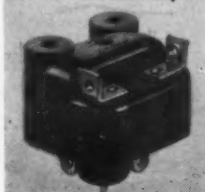


KLIXON Dome Mounted PROTECTORS

Provide Positive Motor Protection

- Prevent Motor Burnouts
- Reduce Factory Returns
- Enable the Unit to Maintain Refrigeration

Klixon Motor Starting Relay completes the combination required to start and protect the hermetic motor. Its positive action and long life eliminate starting troubles and make it a fitting companion for the Klixon Protector. Used and recommended by leading refrigeration manufacturers.



Although hermetically sealed units vary in design, they all can have sure motor burnout protection with Klixon dome mounted Protectors.

Mounted on the dome where they follow every temperature change, a Klixon Protector prevents the motor from burning out by shutting "off" the power should the motor become dangerously overheated. When it cools sufficiently, the Klixon Protector snaps the power "on" again automatically enabling the unit to provide refrigeration. And because it is built-in by the hermetic manufacturer, you get a tested and proven combination that will protect the motor for the entire life of the refrigerator.

Don't forget that motors with Klixon Protectors should also be used with open type compressors. Whether you are a manufacturer of hermetic or open type compressors or a user of these units, it will pay you to use Klixon Protectors.

KLIXON

SPENCER THERMOSTAT

Division of Metals and Controls Corp.

2404 FOREST STREET, ATTLEBORO, MASS.



THE LATEST BOOK ON REFRIGERATION REPAIR

Pocket size — 4 $\frac{3}{4}$ " x 7 $\frac{1}{8}$ "
704 pages \$5.00

Every repair man and owner should have this book at hand for ready reference. Written by Edward R. Magnus, a recognized authority and consulting engineer on refrigeration, the book contains 21 reference tables and 139 line illustrations. Servicing instructions follow a logical pattern in which the problem is presented, the equipment necessary is listed, general instructions follow, and the operation is completed with a short paragraph on precautions to be observed in making the repair.

The Refrigerating Engineer Magazine says: "... We recommend the REFRIGERATION SERVICEMAN'S MANUAL to the practical engineer, technician, or student without reservation."

USED AS A TEXTBOOK
IN 18 LARGE
REFRIGERATION SCHOOLS

PUBLISHED BY
WILCOX & FOLLETT CO.
CHICAGO NEW YORK

ORDER YOUR COPY TODAY

Wilcox & Follett Co.
Dept. ACR 49, 1255 S. Wabash Ave.
Chicago 5, Illinois

Please send me _____ copies of the REFRIGERATION SERVICEMAN'S MANUAL.

Name _____

Street Address _____

City, Zone & State _____

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

quickly as possible?"—L. B. MANG, Moser & Cotins, Inc., New York City.

"Congratulations to you on the American Institute of Graphic Arts award for 'Mysteries of Blair House.' I have read the book, and certainly think it deserves recognition. It's a swell story. I am delighted to see the progress you and your group are making."—FRANK R. PIERCE, President, Dearborn Motors Corp.

"Congratulations on the honors bestowed upon 'Mysteries of Blair House.' I presume these referred to printing, binding, and general make-up of the book. The story should get 'the nod' too, it is one of the best 'who-done-its' I've ever read."—H. R. BOYER, Director, Production Engineering, General Motors Corp.

"It hasn't taken me this long to read 'The Mysteries of Blair House.' The fact is, I started reading it on a little weekend vacation my wife and I took in Southern Indiana and finished it up the night we returned, after driving 300 miles. Normally, after a drive like that, I would tumble into bed, but since you had me hanging on the ropes after each chapter, I had to finish it before I retired, even though I was pretty well fagged. That just about explains the kick I got out of it.

"My son-in-law picked it up and, before he noticed it, he was neglecting business to finish it. You so whetted my appetite for murder mysteries that now I tune in on all the ones on the radio, but must say some of them are pretty flat. Mrs. Ward tried to find me another good mystery story for a present, but she was afraid it wouldn't come up to

specifications after 'Blair House'."—HARLEY L. WARD, Chicago, Ill.

You'll Like Some of Our Other Books, Too

While we're on this subject, here are some testimonials from AIR CONDITIONING & REFRIGERATION NEWS subscribers about some of our other Conjure House books:

"I am reading 'One Foot in the Door' which I'm enjoying very much. In fact there is one paragraph which I have quoted a good many times—the one referring to the need for a brand new set of retail sales people. How right you are!"—WILLARD S. FRENCH, Brooke, Smith, French & Dorrance, Inc., Detroit 4, Mich.

'Alfred Street'

"We have gotten a big 'kick' out of 'Alfred Street'."—G. F. FORSTHOEFEL, Revco, Inc., Deerfield, Mich.

"It's unusual and outstanding. I sincerely enjoyed it."—J. A. RODGERS, White-Rodgers Electric Co., St. Louis, Mo.

"'Alfred Street' . . . very interesting and entertaining."—E. P. SORESEN, Pres, Chicago 14, Ill.

"Both my wife and I have very much enjoyed it."—HOWARD JONES, Sales Manager, Refrigeration Div., Kerotest Mfg. Co., Pittsburgh 22, Pa.

"I don't know when I have enjoyed reading anything so much. . . ."—EARL LINES, Vice Pres., W. W. Garrison & Co., Chicago 11.

"It is always a pleasure to read anything that you have had a finger in."—J. W. RUBENSON, Manager, Refrigeration Div., Day & Night Mfg. Co., Monrovia, Calif.

"I have enjoyed reading 'Alfred Street' very much."—D. A. PACKARD, Kelvinator Div. of Nash-Kelvinator Corp., Detroit 32, Mich.

"When I finished with 'Alfred Street' last night I almost thought I was back at 51 Seminary St., Dubuque, Iowa in the year 1904!"—

HERBERT L. LAUBE, Pres., Remington Corp., Cortland, N. Y.

"I found it extremely delightful."—S. M. HEGGEN, Supervisor, International Harvester Co., Chicago 1, Ill.

"'Alfred Street' was enjoyed by the entire family."—J. W. LAROCQUE, American Flange & Mfg. Co., New York 17, N. Y.

"'Alfred Street' proved to be very entertaining."—W. C. CONLEY, JR., Sales Manager, The Coolerator Co., Duluth 1, Minn.

"'Alfred Street' was delightful and deeply appreciated."—W. J. STAAB, Manager, Media Dept., Fuller & Smith & Ross, Inc., Cleveland 15, Ohio.

"'Alfred Street' and all your Conjure House books are indeed beautiful printing jobs and I want to congratulate you on their appearance."—N. C. DOUGHTY, N. W. Ayer & Son, Inc., Philadelphia 6, Penn.

"Everybody in the Schlegel household from the two-year-olds up have enjoyed reading your books."—N. H. SCHLEGEL, Vice President, Cory Corp., Chicago 1, Ill.

'It Happened In Detroit'

"'It Happened In Detroit' is one of the best books I have ever read . . . and re-read."—ROBERT H. DEREK, McHenry-Derek, Greensburg, Pa.

"I have found it most entertaining."—P. W. PRICE, P. W. Price Advertising, Commerce bldg., Erie, Pa.

"'It Happened in Detroit' is a very humorous publication and one that is particularly of interest to someone who formerly worked in that city."—L. H. HAPP, Batten, Barton, Durstine & Osborn, Inc., New York 17, N. Y.

"It's a book I hate to put down, its anecdotes are so compelling."—M. J. STEINHORST, Emil Steinhorst & Sons, Utica 3, N. Y.

"'It Happened in Detroit' was enjoyed by my entire family."—J. W. LAROCQUE, American Flange & Mfg. Co., New York 17, N. Y.

"My wife and I, as newcomers to Detroit, are now felling and talking a little more like 'natives' with the help of your 'It Happened in Detroit.'"—DON BREWER, Charles M. Gray & Assoc., Detroit 1, Mich.

"It is indeed a beautiful printing job and I want to congratulate you on its appearance."—N. C. DOUGHTY, N. W. Ayer & Son, Inc., Philadelphia 6, Pa.

"I am particularly pleased with the Jackson Book. I know 'Jack,' and contribute to his column now and then."—GEORGE APPEL, Witte & Burden, Detroit, Mich.

'Nectar & Oolie'

"Your beautiful five-color children's book, 'Nectar and Oolie,' made a real hit with my youngsters."—L. C. MCKESSEN, Ansul Chemical Co., Marinette, Wis.

"Both my boys enjoyed 'Nectar and Oolie' and are now busily re-reading it."—T. W. SCHUMACHER, Batten, Barton, Durstine & Osborn, Inc., New York City.

"'Nectar and Oolie' was especially appreciated by my youngsters. It has proven so popular that one copy no longer is sufficient for their requirements."—M. B. MADDEN, The Electromatic Div., Simoniz Co., Chicago.

"The children certainly like 'Nectar and Oolie.'"—JAMES S. LATUCKY, Sutherland-Abbot Advertising, Boston 16, Mass.

"'Nectar and Oolie' is especially appreciated. My favorite little girl has spent many happy hours in reading it herself and having it read to her."—EDMUND J. FELT, The Moss-Chase Co., Buffalo, N. Y.

"My two impressionable young sons as well as the neighbors' children are now very conversant on giraffes and owls."—DON BREWER, Charles M. Gray & Associates, Detroit 1, Mich.

"Reading 'Nectar & Oolie' was like opening a package of lollipops in a kindergarten."—LAURENS H. FRITZ, Sun Oil Co., Philadelphia 3, Pa.

"Several of the 'small fry' were made very happy with copies of 'Nectar and Oolie.'"—E. FEINBERG, President, American Thermal Industries, Inc., Detroit 1, Mich.

"I have re-read 'Nectar and Oolie' many times and never seem to tire of it."—HY JARVIS, Refrigeration Engineering, Inc., Los Angeles, Calif.

"It is a delightful story and very well illustrated."—A. C. DEPIERRO, Buchanan & Co., Inc., New York City.

"'Nectar and Oolie' is a little gem."—S. M. HEGGEN, International Harvester Co., Chicago 1, Ill.

"'Nectar and Oolie' is a great favorite of our oldest grandson."—LOUIS RUTHENBURG, President, Servel Inc., Evansville, Ind.

"The twins have examined 'Nectar and Oolie' with considerable interest and have already learned to identify several animals new to them."—W. B. BOOTH, Campbell-Ewald Co., Detroit 2, Mich.

"My two sons have had a lot of fun reading a copy of 'Nectar and Oolie.'"—KENNETH J. BAYER, Oakleigh R. French and Assoc., St. Louis 6, Mo.

"Our little Sally enjoyed 'Nectar and Oolie.'"—J. C. MILLER, General Manager, Lehigh Mfg. Co., Lancaster, Pa.

"The children fight over it."—ALVA

FORD, Artkraft Mfg. Corp., Lima Ohio.

"My little daughter, Nancy, loves your child's book. But if she asks me to again read about that damned owl that didn't have anybody to play with, I will be forced to send your own child a particularly loud cornet."—WALTER JEFFREY, Nash-Kelvinator Corp.

"'Nectar and Oolie' has taken an awful beating, as it has been read an re-read to my grandchildren throughout the year."—L. M. BORDNER, Sales Manager, Arcade Mfg. Div., Rockwell Mfg. Co., Freeport, Ill.

"Our children have liked the book very much."—H. F. HILDRETH, Mgr. Refrigeration Specialties Dept., Westinghouse Electric Corp., Springfield 2, Mass.

"Most enthusiastically received; in fact a pet teddy bear was promptly christened 'Oolie' and still goes by this designation."—H. A. CHANDLER, McIntire Connector Co., Newark 5, N. J.

"'Nectar and Oolie' is especially charming."—CHAS. E. SELB, Vice President, Selb Mfg. Co., St. Louis County 20, Mo.

"I cannot express my thoughts adequately as to the merits of your 'Nectar and Oolie.' It is truly terrific!"—SLOAN WILLIS, Victor Products Corp., Ranson, W. Va.

You, Too, Etc

"Inside Dope" is likely to talk about almost anything, as you no doubt noticed by this time. One week it may be politics or economics that worries us; another week we may feel like laughing with you in the mutual enjoyment of anecdotes about this and that.

This week we feel like boasting a bit about the occasional books our Conjure House division publishes. Many subscribers to the NEWS seem to like 'em immensely. Why not you? (Please note order blanks elsewhere in the issue.)

It's our hobby, this small-scale publishing enterprise. We aim to have fun and make and keep friends by indulging it.

Nearly all of our Conjure House books are so unusually handsome that you'll be proud to exhibit them at home, keep them in your libraries, and buy extra copies for gifts. And if you think we're just saying this, please remember that "The Mysteries of Blair House" was selected by the sacrosanct American Institute of Graphic Arts as one of the Fifty Best Books of the Year.

Good friends of AIR CONDITIONING & REFRIGERATION NEWS in steadily increasing numbers are sharing our interest in this hobby. Won't you join our club? Satisfaction guaranteed or your money back!

TOP SELLING LINE FOR '49

DAIRY WALL CASES • FREEZERS
• SELF SERVICE CASES • FULL VISION CASES • VEGETABLE CASES
• SELF-CONTAINED OR REMOTE

COLD-IN

YOUR KEY TO BETTER REFRIGERATION

COLDIN CABINET CO., INC.
2800 Webster Avenue, Bronx 58, N. Y.

BOOKS... You Will Enjoy Reading

NO OTHER STAR

By Jane Williams

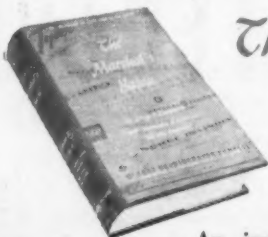
"Not since Rhett Butler has the hero of a novel been so fascinating a scoundrel as is Kirby Storm. . . . Few women live as vividly and movingly in the reader's minds and hearts as Lib-Lee Morral." Here is a grand novel of mid-America; a vivid, moving story set against the background of the first three decades of the century. NO OTHER STAR offers a truly memorable reading experience with an unusual and dramatic climax so powerful that it will not soon be forgotten. **\$3.00**



THE MYSTERIES OF BLAIR HOUSE

by Roy Eastman

For the died-in-the-clue mystery fan at last comes a spine-tingling thrill with the first really new plot twist in years. Done in a style and tradition reminiscent of that master chiller, A. Conan Doyle, THE MYSTERIES OF BLAIR HOUSE so impressed its publishers that costs were ignored in producing this memorable first edition. In two colors, beautifully bound, and with "mood illustrations" by William A. Bostick, this is an ideal gift and a pridesworthy library addition. **\$2.75**



The Marshal's Baton

by George F. Taubeneck

An important and significant book, THE MARSHAL'S BATON is the "advanced course" in salesmanship, written by the author of the deservedly popular ONE FOOT IN THE DOOR. Here, for the first time, is the distilled knowledge and experience of the country's most brilliant sales executives who saw the need of codifying their sales wisdom for the benefit of younger men. It is a brilliant new source of power, and a unique and highly useful contribution to the science of creative sales management. **\$5.00**

ORDER TODAY Use this Coupon

ORDER BLANK

Please Send Me The Following:

- Copies of "No Other Star"
..... Copies of "The Mysteries of Blair House"
..... Copies of "The Marshal's Baton."
☐ Check Enclosed ☐ Bill Me

Name

Address

City..... Zone..... State.....

CONJURE HOUSE

BOOK DIV. OF BUSINESS NEWS PUB. CO.
450 WEST FORT ST., DETROIT 26, MICH.

Some Say

"It's a Great Life"

How About You?

Petros' Theory: Cover All Sales Angles . . .



Charles Petros (right) and his wife are congratulated by Mr. and Mrs. E. A. Germain of J. M. Oberc, Inc., Detroit parts wholesaler, during the grand opening of Petros' new appliance store in down-river Detroit.

\$35 Gift of Beef with Each Freezer Proves It Pays To Be 'Different'

YAKIMA, Wash.—Each and every 70-lb., ¾-boned side of steer beef they bought cost Bob Stephens and Mel Harrington, owners of The Shopping Spot here, \$35. But the pair offered to give one away free with every Deepfreeze home freezer purchased at their store.

They even put a picture of themselves placing a side of beef in a freezer in this display advertisement in the local newspaper.

Result: They sold nine freezers the day the advertisement appeared.

"It's the old sales formula working," they explained. "Do something different and you'll make sales."

New Store Opened by Prewar Dealer In St. Petersburg, Fla.

ST. PETERSBURG, Fla.—Henry Ewin, wartime expert for the Army on radar, television, and electronics, opened a new radio and appliance store at 678 Second Ave., South, the second retail establishment he has operated here.

The new store will handle Philco products exclusively. Ewin closed his first store in 1942.

Flip-Book Answers Appliance Questions If Salesmen Are Busy

BRIDGEPORT, Conn.—The All Automatic washer "Answer Book" now being released to retailers by the General Electric Co. marks a new approach to the old merchandising problem of how to entertain customers, and answer their questions, when all the salesmen on the floor are tied up.

Resembling the common flip-open address index, the "Answer Book" consists of a hardboard cover and 12 illustrated pages. Questions most frequently asked about the General Electric automatic washer are listed on the cover.

When the customer wants to find the answer to one of these questions, she merely slides a movable indicator alongside the question and releases a clip at the bottom of the cover. The book then flips open to the desired page.

Igoe Bros. Handles Hamilton

TWO RIVERS, Wis.—Igoe Bros., Inc., of Newark, N. J., has been appointed distributor for the Hamilton automatic clothes drier, according to Chas. H. Rippe, sales director of the home appliance division, Hamilton Mfg. Co. here.

Dealer Utilizes Own Crew To Build New Detroit Store

Commercial Firm Branches Out Into Household Field

DETROIT—Because he and his crew of eight servicemen built his new store all by themselves, even to the extent of helping fell the trees and mill the lumber in Michigan's north woods, Charles Petros figures he saved a conservative \$10,000 on the building.

Petros, who has had 20 years of experience in selling, installing, and servicing commercial refrigeration in Detroit's down-river area, put up the structure to house his new household appliance and air conditioning operations.

"I think it's silly not to cover all angles of the business," Petros declared during the grand opening staged on a recent Saturday.

"Sure, we're going to continue our commercial business, but I think a man is throwing away business if he doesn't cover all angles."

So in addition to promoting such commercial refrigeration lines as Ansul, A-P, Copeland, Detroit Lubricator, Krack, Peerless, and Temp-rite, Petros now has household appliance franchises for Crosley, Gibson, and Hotpoint, plus Apex washers; radios, television, and small appliances. He also intends to get into air conditioning, he said.

. . . Is Supported by Opening-Day Crowd



By building this store himself with the aid of eight servicemen, Petros figures he saved \$10,000. Note the counter at the rear which he uses for retail sales of replacement appliance parts to customers and storage of his own stock of commercial repair parts.

The store was crowded on the opening day with friends and a lot of prospects, whom Petros entertained with free beer and pop plus sandwiches, and a television set.

One of the somewhat unusual features of this new appliance store is the large counter extending across part of the rear of the sales floor. With the stock bins behind it, the appearance is that of a parts wholesaler's establishment.

Petros intends to use it for some over-the-counter retail sales of items like belts, but the stock bins will also serve for the company's own supply of repair and replacement parts.

The building, which measures 40 ft. by 72½ ft., was started on Nov. 25 last year, and opened in March. Only part of the construction work

that was subtle to "professionals" was the structural steel.

"After seeing how simple it was to put that up, I wish now I had done it myself," commented Petros.

Available from 1/2 to 10 H.P.

CLEANABLE DOUBLE-TUBE COUNTER-FLOW WATER-COOLED CONDENSERS

Write for literature

Halstead & Mitchell
BESSEMER BLDG.
PITTSBURGH 22, PA.



Yes, Yes, a thousand times...YES

Want to save time, trouble, and profit-eating call-backs on your refrigeration control replacements? Then make the Cutler-Hammer refrigeration control catalog your standard guide on replacements. Here you will find "specific-fit" units which are not merely listed but already manufactured by Cutler-Hammer for more than 1,000 individual refrigerator models which the industry has produced since 1925. No "modifying", no fussing, no compromises, when you put in C-H "specific-fit" replacement control units. And you'll also quickly see how the widely-known Cutler-Hammer name

(advertised in The Saturday Evening Post, Time, Newsweek, American Home, Better Homes & Gardens, House & Garden, etc.) builds customer confidence and good will. The C-H refrigeration control catalog, as well as the items you need, are available through your authorized C-H refrigeration wholesaler. Do not forget, this C-H refrigeration control line includes the outstanding general purpose replacement control (9521N9) for use with motors having "built-in" overload protection. CUTLER-HAMMER, Inc., 1362 St. Paul Avenue, Milwaukee 1, Wisconsin.

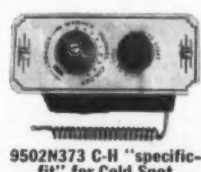
Here are typical examples from the broad line of C-H "specific-fit" refrigerator replacement controls.



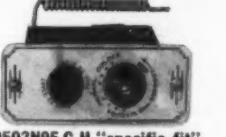
9502N388 C-H "specific-fit" for Norge 1932-33-34 models



9521N64 C-H "specific-fit" for Norge 1938 models



9502N373 C-H "specific-fit" for Cold Spot 1932-33-34-35-36 models



9502N95 C-H "specific-fit" for Hostess 1933-34-35-36-37-38 models



9521N69 C-H "specific-fit" for Philco 1941 models



Featured by Cutler-Hammer refrigeration wholesalers and recommended by alert service dealers from coast to coast.

Revco

Low temperature refrigeration specialists

There is no finer line than Revco . . . backed by many years of pioneering and experience in low temperature refrigeration engineering. It is a real profit line . . . customer appeal assures you more and faster sales, reducing selling costs . . .

the dependable, long-life Tecumseh Hermetic units reduce service calls to a minimum . . . complete customer satisfaction, in performance and low cost operation, means more "word-of-mouth" selling for the Revco line.

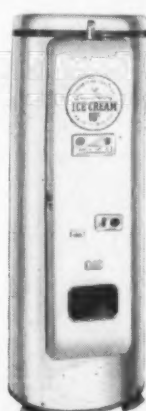
The New Revco Heavy Duty 12.3 Cu. Ft. Chill Chest



Revco Chill Chest Home Freezers have features that "sell" . . . easy to reach compartments . . . lowest operating cost of any freezer . . . five year warranty . . . truly beautiful design . . . floating action lid . . . exclusive safety lights . . . and many others.



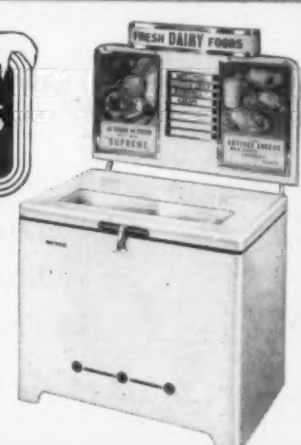
The Revco 6.2 Cu. Ft. Chill Chest



Thousands of Revco Ice Cream Dispensers are now in use. Easy to operate . . . can be serviced by anyone. The Revco Mono-Mat, illustrated at left, holds up to 121 cups.



Designed for "impulse" sales of Ice Cream, Dairy Products and Frozen Foods . . . big capacity and small floor space. Illuminated back bar . . . thermopane glass top. A wide variety of styles.



Dealers and Distributors: Limited Territories Still Open. Write for Franchise Details.

Revco INC. • DEERFIELD, MICHIGAN
Low Temperature Refrigeration Specialists

Porcelain Enamel

New Developments Enhance Its Value as a Corrosion-Resistant Covering Material for Refrigeration Products

By M. E. McHardy, Superintendent, Enamel Department, Hussmann Refrigerator Co.

Several types of commercial finishes for iron or steel products are used by industry for protective coatings and consumer appeal. Each finish has certain inherent qualifications and each is used where it fulfills production, engineering, sales, service, and consumer requirements. One type finish may be used to cover a product in its entirety, or a combination of two or more types may be required.

Porcelain enamel is one of the many available finishes, and, due to some of its qualifications, serves such production fields as refrigeration, ranges, washing machine tubs, hollow ware, signs, kitchen sinks, bathtubs, heaters, tanks, architecture, table tops, small accessory parts, artwork, and is also being used in newer fields such as homes, sheet steel wallpaper, textile industry, aircraft, and many others. The proper type of porcelain enamel must be considered to best serve its particular assignment in the fields mentioned.

This discussion will be concerned with the definition, properties, processing and developments of porcelain enamel as used in the refrigeration field.

For the sake of clarity, it might be well to differentiate between the finishes known as "enamels." The word "enamel" has been used to de-

scribe the 300° F. high bake synthetic paint enamels introduced about 1932; prior to that time the word "enamel" usually referred to the material porcelain enamel or the glassy composition applied to metal and fused thereon at a low red to bright red heat.

Porcelain Enamel is a glassy composition compounded from glass developing raw materials and smelted at high temperatures into "frit" or small friable particles of enamel glass produced by discarding the molten glassy mass into tanks of water.

The frit being the base substance of porcelain enamel is ground to a specified fineness in porcelain lined ball mills and suspended in a mixture of water, clay, and certain chemicals, and the wet enamel applied to clean fabricated metal parts by means of spraying or dripping. This discussion will be concerned with the wet process porcelain enamels applied to enameling iron.

The conventional porcelain enamels used are:

1. Ground Coats

Ground coats are generally cobalt bearing, usually blue in color and applied directly to the base metal as an adherence or bond coating to provide a smooth surface for subsequent cover coat applications.

Some ground coats are rendered black by the fritting process or by the addition of black oxide as mill additions and used as an edging material to provide a reinforced "black edge" or a solid black color. Ground coats may also vary in color and are often used as a finish coat applied directly to the base metal.

2. Cover Coats

Cover coats are generally white opacified enamels applied in one or two coat applications over the fired ground coat to provide a glossy white finish coat. Cover coats may be processed in practically any color if so desired by milling color oxides with the proper frits.

In some cases cover coats are being applied directly to the base metal as a white finish coat; however, a special type of base metal must be used to provide the proper adherence between the porcelain enamel and the metal.

GENERAL PROCESSING METHODS

In order to minimize process defects, a special low carbon enamel-iron sheet was developed for the porcelain enamel industry, and was used almost exclusively prior to the late war in gauges ranging from 16 to 22, as determined by the design of the product.

The fabricated sheet iron parts must first be cleaned, acid pickled, nickel flashed, and neutralized in a pickling process, after which the wet enamel is applied by dipping or spraying.

After applying the wet enamel in a uniform coating, the water is evaporated by a drying process leaving a uniform film of powdered porcelain glass on the surface of the ware. The powdered glass is then fused into a vitreous coating through a firing process in which the coated panels are passed through a heating zone at temperatures ranging from 1,500 to 1,570° F. with time cycles ranging from about two minutes depending upon the type of furnace used, weight of the furnace load, and thickness of the enamel coating.

The result is then a glass coating developed by stages of using a glass compound which is ground and suspended in water, applied wet, dried, and then fused back into the glass state as a durable thin glass coating adhering to the base metal.

Ground coats are usually applied to obtain a fired thickness of .003-.004 in., while the total thickness of the cover coats including the ground coats may vary from .007-.015 in. depending upon the number of coats applied.

Along with the improved reflectance or covering power of the cover coat porcelain enamels, there has been a trend in recent years by many users to process interior as well as exterior surfaces in one cover coat application over the fired ground coat, thereby reducing thickness of application.

Some of the outstanding properties or qualifications of porcelain enamel as a product finish are:

1. Appearance—variations.
 - (a) White.
 - (b) Colors or combination of colors.
 - (c) High gloss—Medium gloss.
 - (d) Matt or Semi-matt.
2. Moisture and corrosion resistant.
3. Will withstand reasonable thermal shock treatment.
4. Alkali resistant.
5. Acid resistant.
6. Wear resistant—long lasting.
 - (a) Porcelain enamel is a glass and must be treated as such; however, as a finish it will withstand normal impact or rough handling and with proper care will last indefinitely.
7. Cleanliness—easy to clean—sanitary.

Enamel shop operators generally maintain control standards to minimize process defects, maintain standard quality, and thickness of application. The shop control is supplemented with standard tests such as acid resisting tests where acid resisting enamels are necessary; adherence tests by impact or drop weight method; thickness tests by use of a standard thickness gauge and actual weight method; thermal shock tests on those parts that will be subjected to thermal shock in field use; salt spray tests; reflectance tests by means of a reflectometer; cross bend and torsion tests to check resistance to chippage, and many others.

HOW DOMESTIC, COMMERCIAL FIELDS COAT PRODUCTS

As stated, each manufacturer will select a finish or a combination of finishes that will best suit his or their particular product. Refrigerator manufacturers have found that a complete porcelain enameled unit is necessary in some cases where a combination of porcelain enamel with other finishes is entirely satisfactory in others.

The domestic refrigeration field has used ground coat and one coat of cover coat enamel on interior liners and accessory parts, each coat requiring a separate fire. A colored ground coat as a one fire finish has been used on interior liners for freezer chests.

The commercial refrigeration field has used ground coated parts with one cover coat application for interior parts and one to two applications of

cover coats for exterior parts. One fire ground coat of black enamels are used in some cases on interior and exterior finishes. Some manufacturers are applying the white cover coats directly to the base metal taking advantage of newer methods of processing.

RECENT DEVELOPMENTS

The ground coat porcelain enamels used through the years have remained fairly stable in their use and performance; however, they have been softened to mature at lower firing temperatures. The greatest development or advancement has been along the lines of the cover coat finishes, and with each improvement it has been possible to realize cost reduction and better field performance through lighter weights of application along with higher reflectance.

Cover coat enamels are usually distinguished by the opacifier or the material used in smelting to develop whiteness and covering power.

Fluorine-opacified enamels and low antimony-opacified enamels with characteristic high application weights and low reflectance were used in the 1920's. Antimony-opacified enamels were introduced in 1930 and improved in 1934. In 1938 an improved super-opaque antimony-bearing enamel was introduced, although the maximum reflectance was not greatly improved over the antimony enamels introduced in 1934, spray weights were reduced about 30%.

Zirconium-opacified enamels were introduced in the early 1940's with still higher reflectance at a given spray weight, making it possible to further reduce spray weights or thickness of application.

PRODUCERS CHANGED TO ONE 'COVER' COAT

At this time many refrigerator manufacturers took advantage of the improvements and changed to a one cover coat application over fired ground coat on interior domestic type liners in preference to the normal two coats of cover coats to reduce application weights, cost, and yet maintain standard quality. It was also possible to fire ground coated and cover coated parts together at the same time and temperature cycles.

The new titanium-opacified enamels were introduced in 1946 with general improvements to date. By using the new titanium enamels, a one coat acid resisting finish may be obtained exhibiting high gloss, high reflectance, and good scratch resistance at application weights of about .005 in. applied over fired groundcoat.

Dr. G. H. Spencer-Strong of Pemco Corp., Baltimore, has shown that 100 pounds of the enamels used in 1922 would cover approximately 280 sq. ft.; while the antimony-opacified enamels introduced in 1938 would cover approximately 450 sq. ft. The same amount of zirconium-opacified enamels will cover 540 sq. ft.; while the titanium-opacified enamels which are highly opaque will cover approximately 1,040 sq. ft.

In 1945 a new type of titanium-bearing killed steel was introduced to the porcelain enamel field whereby it is possible, through careful process control, to apply the cover coat enamels directly on the base metal, eliminating the necessity of the conventional ground coats to produce adherence.

Experience is being gained with this material and it may be possible to produce a one coat, one fire acid resisting finish with the titanium-opacified enamels applied directly to the base metal at a thickness of .004-.006 in.

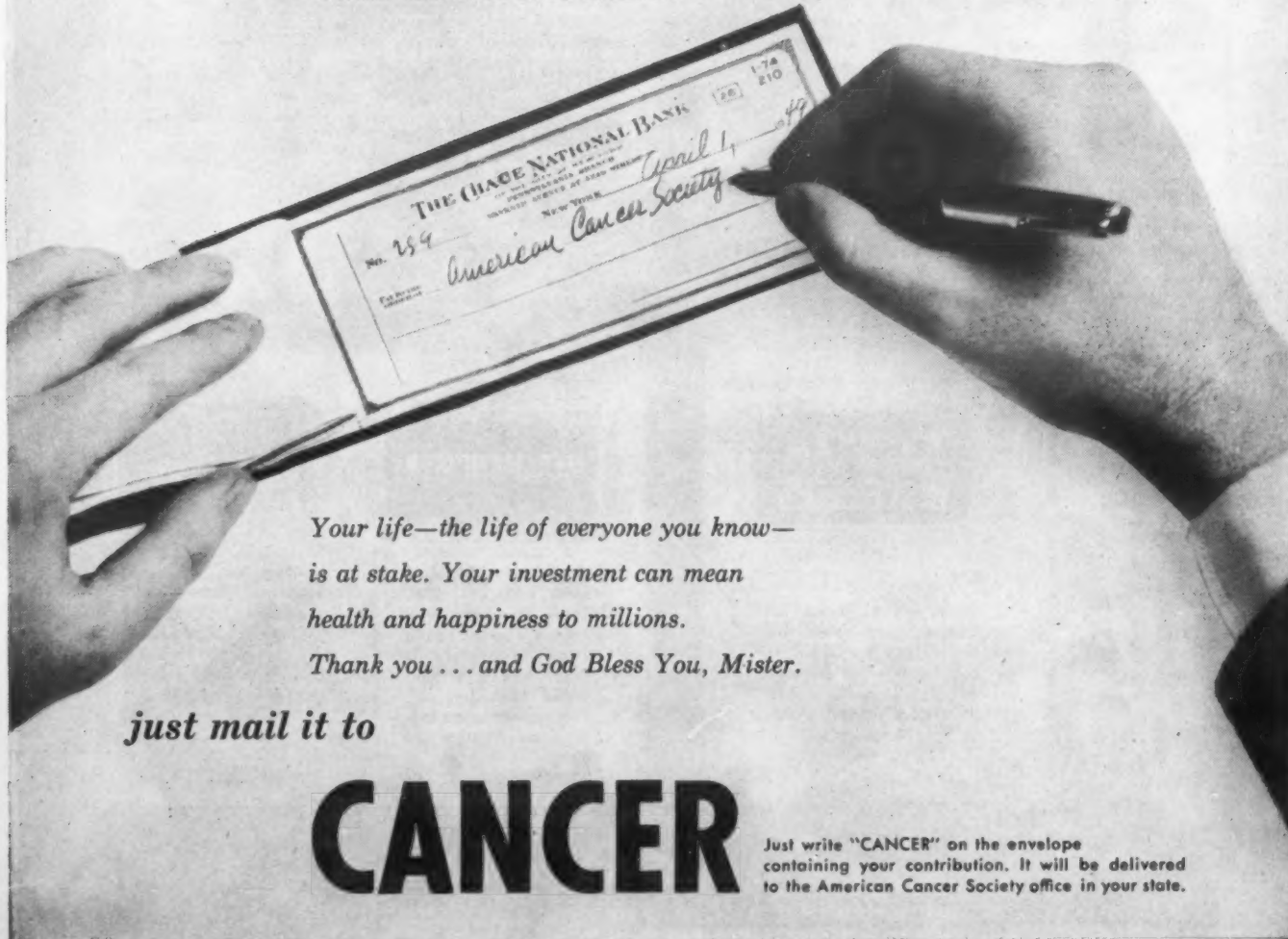
A still more recent development which is gaining recognition through experience is the development of porcelain enamels which will mature at temperatures around 1,300° F. These materials may have possibilities in the refrigeration field since it is possible to minimize warping and buckling of the base metal by fusing the enamels at temperatures slightly under the lower critical temperatures of iron or steel, and will eliminate the necessity of special enameling iron. It may also be possible to reduce the gauge of the metal used.

As has been shown, the covering power of porcelain enamel has increased with each new development and considerable progress has been made in the past six years towards reducing enamel thickness. Porcelain enamel or glass fused on metal has long served the refrigeration field as a suitable and lasting finish. Research and development should bring forth many improvements to continue to make porcelain enamel a desirable product for finishing.

God
bless you,
mister

...thousands of Cancer patients are grateful to you!

Cancer's annual toll of 200,000 lives is grim proof of the need for your continued generosity. The money you contribute to the American Cancer Society helps pay for the development of methods of treatment which are now saving about one-quarter of the people who are stricken with Cancer... people who might otherwise have died. Your money supports the work of more than a thousand specialists who are fighting to find the cause and cure of Cancer. And it finances a vast education program that trains professional groups, tells the public how to recognize Cancer and what to do about it.



Your life—the life of everyone you know—is at stake. Your investment can mean health and happiness to millions. Thank you... and God Bless You, Mister.

just mail it to

CANCER

Just write "CANCER" on the envelope containing your contribution. It will be delivered to the American Cancer Society office in your state.



Excise Tax Hit--

(Concluded from Page 1, Column 5) of those that are exempt," Newcomb indicated.

Newcomb said a 2½% tax on a wide variety of products would produce far more revenue than the present 10% tax.

At another point in his talk, Newcomb noted that a recent survey by National Electrical Manufacturers Association disclosed that there were 87,066 dealers handling electric refrigerators, about 2½ times as many as in 1941.

"With this number on refrigerators alone, the over-all number of dealers must be astronomical," he stressed. "It is obvious that the industry cannot continue to support all of them."

Also, he criticized the Federal Reserve Board for its "delayed and then inadequate decision" in handling Regulation W.

"The public was geared to an expectancy that something was going to happen to this regulation for several months prior to the decision, and as a result postponed their buying impulses," he asserted. "They were further geared to an expectancy of at least 10% down, with 24 months to pay."

"The half-way modification that was finally released left them with the feeling that it was only the first step, and therefore they are still sitting back waiting for the real McCoy."

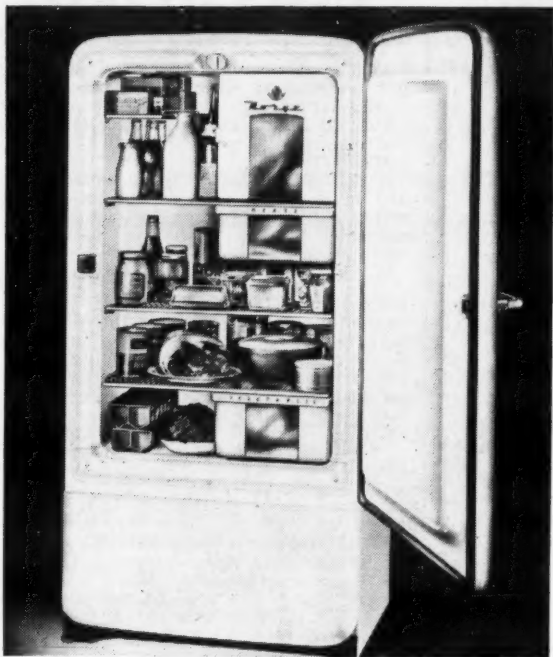
"This is convincingly substantiated by the Federal Reserve Board itself in announcing that the current rate of public saving is 9% against a normal of 3%."

Emphasizing the great need for education and sales training in home appliance merchandising, Newcomb stated that 42.8% of the population have had no adult experience with a peacetime economy. Furthermore, he said, 44.4% have had no adult experience with a free market for any consumer goods.

"The latter group," he continued, "consists principally of minors, of course. But, estimating that each year three million minors become adults, we can assume that there are 24 million of the present adults who have never seen a free market in their adult life."

"In other words, at least one out of every four adults has never experienced a real sales approach on electric appliances; has never really been sold any; or has never actually sold any himself," he further stated.

Lower Price Norge Self-Defroster Model



Carrying a price tag of \$269.95, this new 8-cu. ft. Norge unit is the lowest priced model to have the built-in automatic defrosting feature. The unit has a frozen food storage capacity of 27 lbs. and room on the beverage shelf for more than a case of 12-oz. bottles. It also has a fold-away shelf to give greater flexibility.

Norge Line Change--

(Concluded from Page 1, Column 4)

First public announcement of the refrigerator was made in a few localities on April 5 and was to be followed by announcements in other areas throughout the nation during the balance of the month.

These announcements were preceded two weeks earlier by teaser campaigns which employed outdoor posters, newspaper advertising, radio spot announcements, postcard mailers, and window streamers for dealer use.

Distributor and dealer indoctrination in the plan began with a series of distributor meetings which started in late February in New York City, Atlanta, Detroit, Dallas, Chicago, Denver, and San Francisco. During these, factory personnel outlined the entire program and explained materials being made available in basic dealer promotion kits under the cooperative advertising plan.

Primary piece in the dealer promotion kit was a plan book which outlined the entire campaign. Included also in this "package" were sample treaser and announcement newspaper advertisements of varying sizes, window streamers, postcard mailers, and radio commercials. In addition, there were pick-up folders, specification sheets, merchandise cards, and sample product mailers.

Sales Directors--

(Concluded from Page 1, Column 2) freezer, and refrigeration specialties sales. Spencer will be assisted by Frank H. Toler, former district representative and more recently in the sales promotion department, who will supervise water cooler sales.

4. Addition of several product specialists to the staff.

5. Expansion of the number of sales regions from five to six.

6. Realignment of the sales promotion department.

R. H. Klinger, acting manager of home freezer and refrigeration specialties sales, is being placed in charge of contract sales. Burt Gavitt, widely experienced in the home heater field, has joined Norge as a specialist under M. B. Robb, manager of home heater sales.

Hazen Hillyer, former district representative, lately in the sales promotion department, has become a specialist in the home laundry equipment department.

In the field organization, C. H. Alden, who has been in charge of the midwest region, has become manager of the newly-created southeast region. He will have headquarters in Atlanta. The vital midwest territory centering around Chicago remains open for the present.

James H. Baine, former Norge district representative, has rejoined Norge. He will have charge of the newly-formed south central region with headquarters in Memphis.

R. H. Pizor remains as manager of the eastern region with headquarters in New York; J. H. Webster continues in charge of the central region with Detroit as his headquarters; J. M. Tenney, Los Angeles,

continues to manage the western region.

Announcement of the completion of the Norge field organization is expected within the next 30 days with the naming of additional district representatives.

L. W. Phillippi, former district representative, has been placed in charge of sales promotion for all products. H. R. Stouffer will supervise sales training activities. Stouffer was formerly a product promotion manager.

General sales manager Law, who joined Norge as refrigerator sales manager after serving as a lieutenant-colonel in the Air Forces during the war, was formerly associated with Reinhard Bros., Minneapolis Norge distributorship. He became Norge general sales manager in August, 1948.

Connell, newly-appointed field manager in charge of the six regional managers and 18 district representatives, also came to Norge by way of a Norge distributorship. He was formerly Norge sales manager for Ludwig Hommel & Co., pioneer Norge distributor, has had a broad experience in appliance sales management, both wholesale and retail. Connell's former position of gas range manager remains open for the present.

Cameron, Norge merchandise manager, will supervise and coordinate the over-all product program for the sales department. He started as field representative in the service department in 1927, successively became assistant manager of national service and manager before becoming assistant to Harry Spencer.

Dean Spencer, newly-appointed refrigerator, home freezer, and refrigeration specialties sales manager, is another long-time Norge employee.

Not included in this kit, but also available were poster paper for local posting under the cooperative plan, car cards, truck cards, and additional radio spot transcriptions.

Dealer efforts at the local level are being supported by factory-paid poster announcements in 150 cities.

Ted's Plumbing, Heating Files

BUFFALO—A business name has been filed in the Erie County clerk's office for Ted's Plumbing & Heating Co., 1317 Walden Ave., by Theodore Wachowiak.

FIREPROOF INSULATION

AT NO EXTRA COST WITH ZEROCEL

- Efficient, "K" factor of 0.24 BTU at 60°F.
- Fireproof
- Will not absorb moisture
- Odorless
- Will not settle
- Immune to fungus, rot and decay
- Easy to cut with a knife

GOLD BOND
ZEROCEL
INSULATION



AVOID fire hazards and protect your investment too. Build your plant of fireproof materials—including insulation! Gold Bond ZeroCel Insulation is as fireproof as the mineral from which it's made. It simply can't burn! And it has all the other qualities you need and expect in top grade insulation.

Leading owners and builders throughout the Refrigeration Industry specify ZeroCel for three important reasons: perfect insulation performance, fire protection, and economy. A special booklet with detailed drawings showing the best method of installing ZeroCel will gladly be sent upon request.

National Gypsum Company, Dept. A-94, Buffalo 2, N. Y.

Gentlemen: Please send me a FREE copy of the new Gold Bond ZeroCel Booklet, "Fireproof Refrigeration Construction."

Name
Company
Street
City State

**SEND FOR
FREE BOOKLET
TODAY**

THAWZONE
PATENTED
The PIONEER FLUID DEHYDRANT

Goodbye to
ALL
MOISTURE
IN ANY
REFRIGERATING
SYSTEM

THE MOVING DEHYDRANT
HIGHSIDE CHEMICALS CO.
10 COLFAX AVE. CLIFTON, N. J.

Pictured above is THAWZONE being added to the refrigerant via the evaporator. If desired, it can be added to other parts of the system also, such as the crankcase, liquid line, etc. But, wherever you inject THAWZONE, it travels throughout the system, searching out and destroying every trace of moisture chemically.

Ask yourself this: Can the ordinary fixed dehydrator do a 100% job in getting rid of moisture? Remember that moisture becomes trapped in out-of-the-way places and cannot move around. For this reason, the dehydrant must go to the moisture... possible only with a liquid that mixes and travels with the refrigerant. The answer? THAWZONE, of course!

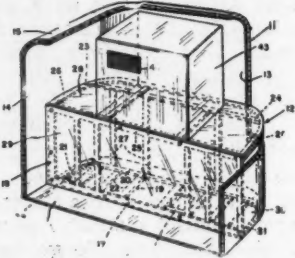
Your wholesaler carries THAWZONE
TRADE MARK REG. U.S. PAT. OFF.

ALSO MAKERS OF
TRACE
REFRIGERANT
LEAK DETECTOR

PATENTS

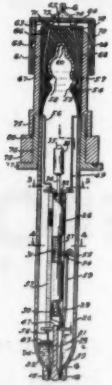
Week of January 25
(Continued)

2,459,946. MOUNTING FOR REFRIGERATING APPARATUS AND THE LIKE. Henry O. Kirkpatrick, Detroit, Mich., assignor to Advance Mfg. Co., Inc., Detroit, Mich., a corporation of Michigan. Application Oct. 19, 1944, Serial No. 559,399. 3 Claims. (Cl. 98-10.)



1. Air conditioning apparatus for a closed cargo carrying vehicle, comprising a self-contained portable unit adapted to be completely installed within the interior of a vehicle of the type mentioned at the closed forward end thereof, said unit having a portable frame structure and air conditioning apparatus carried in its entirety, by said frame structure, the said frame structure having spaced upright substantially rectangular front and rear sections and connections therebetween providing a hollow open framework of substantially square cross section adapted to rest upon the floor of the vehicle in substantially nested relation to and be partially closed by the upright front and side walls and floor of the vehicle, means for closing the top of said open framework, including a separate platform secured to said framework and abutting the upright front and side walls of said vehicle, means for closing the rear of said open framework, including a panel detachably secured to said framework and abutting opposite upright side walls of said vehicle, said platform and panel cooperating with the floor and upright front and side walls of the vehicle to close entirely said framework and form a closed chamber, and a hood on top of said chamber, portions respectively of said air conditioning apparatus being within said chamber and hood, the portion within said hood being an evaporator, said closed chamber being provided with means for communication with air inlet and outlet openings in portions of said vehicle whereby air from the atmosphere outside the vehicle may flow to and from said chamber to cool the portion of said air conditioning apparatus within said chamber, and said hood having an outlet opening through which air conditioned by the evaporator within said hood may be discharged into the interior of the vehicle.

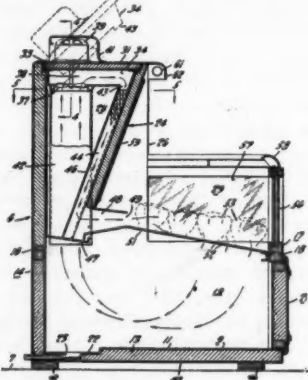
2,459,968. ADJUSTABLE THERMOSTAT. John Leonard Schwartz, Philadelphia, Pa., assignor, by mesne appointments, to The Philadelphia Thermometer Co., Philadelphia, Pa., a partnership comprised of J. Leonard Schwartz and Hugo Engelhardt. Application Aug. 21, 1945, Serial No. 611,819. 26 Claims. (Cl. 200-141.)



11. An adjustable thermostat comprising a glass bulb, mercury in the bulb, a column of glass mounted on the bulb, said column having two parallel spaced bores comprising respectively a working and a common bore extending longitudinally thereof with one of the bores in communication with the bulb mercury in the common bore, a glass housing fused to the column remote from the bulb, a sup-

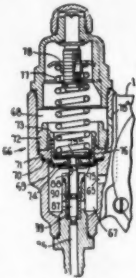
port mounted in the housing, a rotatable element mounted in the support and including an armature rotatable in the glass housing, an electrode axially adjustable in the working bore, means connecting the electrode and rotatable element for axially adjusting the electrode with rotations of the element, an electrical connecting system in electrical connection at one end with the electrode and at the other extending through the glass housing, a common electrode in the housing extending into the mercury in the common bore, electrical connecting means leading from said common electrode through the glass housing, means establishing electrical connection between the common electrode and the mercury in the working bore, and rotatable means establishing polarized magnetic flux externally of the housing incident upon said armature and so arranged as to rotate the armature and rotatable element as the means is rotated.

2,460,030. OPEN-TOP REFRIGERATED DISPLAY CASE. James C. Bear, Berkeley, Calif., assignor to The Union Ice Co., San Francisco, Calif., a corporation of California. Application Oct. 7, 1946, Serial No. 701,795. 5 Claims. (Cl. 62-89.5.)



1. A refrigerated display case comprising a cabinet having an open-top display portion, an inclined wall forming the back of said display portion, means on said wall for supporting ice spaced from said wall to define a channel, a perforate produce shelf in said display portion, means for establishing communication between said channel and the upper side of said shelf, means defining a duct extending from the lower side of said shelf to said channel, and means for circulating air through said duct and then through said channel.

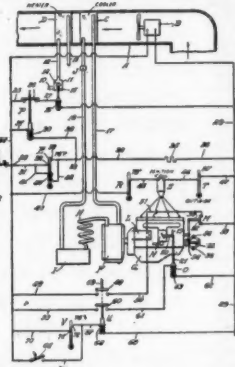
2,460,048. PRESSURE REGULATING MEANS. Adolf von Wangenheim, Detroit, Mich., assignor to Detroit Lubricator Co., Detroit, Mich., a corporation of Michigan. Application March 25, 1944, Serial No. 528,073. 10 Claims. (Cl. 137-153.)



1. In a device of the character described, a housing member having a pressure chamber with an inlet and having an outlet chamber, a diaphragm member of flexible stretchable resilient material separating said chambers, a backing member in said outlet chamber and seating on and clamped to said diaphragm member, said backing member having an opening therethrough, valve means in said pressure chamber and cooperating with and controlling flow through said opening and having a constantly open bleed, a flexible stretchable resilient member in said outlet chamber and seating on said backing member to close said opening and having a constantly open small opening therethrough for free flow of fluid passing through said bleed, said stretchable member automatically stretching and contracting to regulate the size of said small opening in accordance with the flow permitted by said valve means.

2,460,135. ELECTRIC CONTROL FOR BUS HEATING AND COOLING SYSTEMS. Timothy J. Lebane and Everett H. Burgess, Chicago, Ill., assignors, by mesne assignments, to Vapor Heating Corp., a corporation of Delaware. Application Sept. 23, 1946, Serial No. 698,770. 6 Claims. (Cl. 257-3.)

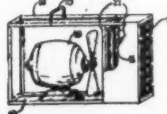
5. In combination with means including a conduit and a fan for withdrawing air from an enclosed space and thereafter re-introducing the air into the space, a radiator in the conduit for heating the air and a cooling apparatus including a cooler



in said conduit for cooling said air, an internal combustion engine provided with an electrical ignition circuit, an electrically energized starter and a throttle valve normally supported in partially opened position to maintain slow speed operation of the engine; of means for cooperatively controlling the heating and cooling apparatuses comprising an electrically energized valve for delivering heating medium to the radiator; means including a thermostat responsive to temperature changes within enclosed space and set to function at a pre-determined temperature to close said valve; a second thermostat responsive to temperature within the enclosed space and set to function at a lower temperature than the first thermostat to make said ignition circuit effective; electrically energized throttle opening means for moving said throttle to its full open position; and an electrically energized relay for simultaneously closing an energizing circuit through said starter and through said throttle opening means; manually operable means for momentarily energizing said relay to start said engine with fully open throttle and thereafter permit the engine to return to its low speed operation, whereby the heating apparatus is effective to re-heat the air during the low stage cooling of the cooling apparatus.

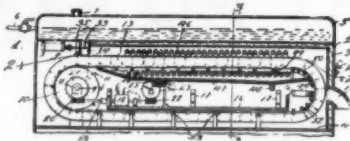
Week of February 1

2,460,335. AIR PURIFYING DEVICE. William J. Buss, Norristown, Pa. Application Oct. 9, 1945, Serial No. 621,294. 2 Claims. (Cl. 21-74.)



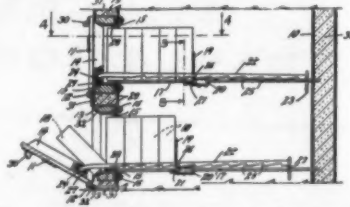
1. An air purifying screen comprising a pair of inwardly facing vertical side frame members, a horizontal bottom pan secured to the lower ends of said side frame members, a horizontal top pan secured to the top ends of said side frame members, a vertical front brace member secured centrally between the front edges of said top and bottom pan, a vertical rear brace member secured centrally between the rear edges of said top and bottom pan, said vertical brace members being V-shaped in cross-section and facing inwardly, a plurality of sheets of wire mesh positioned between said vertical frame members and received within and perpendicular to the side frame members, and a filling of loosely packed deodorant material between adjacent sheets of wire mesh.

2,460,341. ICE CUBE FORMING AND DISPENSING MACHINE. Vernon T. Ericson and Earl F. Davis, Jacksonville, Fla. Application July 12, 1945, Serial No. 604,672. 4 Claims. (Cl. 62-106.)



2. An ice cube forming machine comprising an endless flexible belt having water receiving pockets arranged in pairs therein, means for intermittently discharging water into the pockets, means for freezing the water in the upper flight of the belt as it is intermittently advanced, said means comprising a cooling coil transversely surrounding said flight of the belt, a drip pan beneath the upper flight of the belt, a roller carrying supporting frame carried by the drip pan and supporting the upper flight of the belt and rollers engaging the outer side of the lower side of the belt preventing sagging of the belt.

2,460,396. FROZEN FOOD DISPENSER. Milton Rifkin, Denver, Colo., assignor, by mesne assignments, to Pres-O-Mat Corp., a corporation of Illinois. Application Aug. 9, 1944, Serial No. 548,098. 7 Claims. (Cl. 312-36.)



1. A dispensing device for frozen foods and the like comprising: an insulated cabinet; an opening in a wall of said cabinet; hinge means adjacent said opening; a door supported by said hinge means and closing the outer portion of said opening; a flexible sealing gasket completely surrounding said opening and projecting into the latter to restrict the size of the opening; rigid package supporting means extending into the cabinet from the opening and supporting a row of packages in alignment with said opening; and means operable by said door for sliding the row of packages forwardly along said supporting means into the embrace of said gasket.

(To Be Continued)

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$2.50 per insertion 50 words or under. 5¢ ea. additional word.
RATES for all other classifications \$5.00 per insertion 50 words or under. 10¢ ea. additional word.
ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

POSITIONS WANTED

EXPORT AND domestic-sales engineer presently employed large refrigeration export house, handling products of major refrigeration and air conditioning manufacturers. Know sales, installation, service and correspondence. Desires connection with solid, wide awake, straight shooting organization. BOX 3144, Air Conditioning & Refrigeration News.

ERECTION AND service engineer: age 42, now located in Canada, fully experienced in high and low pressure work, booster systems, able to handle the largest installations independently. Now employed, wants change for larger scope and possibilities. Can go anywhere. BOX 3145, Air Conditioning & Refrigeration News.

COMMERCIAL & AIR conditioning engineer, project engineer, designing refrigeration equipment & plants, supermarkets, locker plants, restaurants, theaters, etc. Some estimating, write specifications and proposals. General service manager, factory representative. Thirty years experience. Go anywhere, prefer Illinois. Would take low salary on a partnership deal. Excellent reference. Write BOX 3146, Air Conditioning & Refrigeration News.

MECHANICAL ENGINEER, age 35, widely experienced in application, design and sales of air conditioning, refrigeration and industrial systems. Capable of assuming great responsibility, highly skilled in administrative duties; possess superior mechanical traits, and not afraid of hard work or long hours. Desires association with reputable consulting firm or as manufacturer's representative in Los Angeles area. Registered California mechanical engineer. BOX 3149, Air Conditioning & Refrigeration News.

AVAILABLE SALES representative for established manufacturer of refrigeration and air conditioning components including condensing units, condensers, evaporators, controls or accessories. Fourteen years engineering experience, four years sales experience. Age 38. Cover Eastern Pennsylvania, New Jersey and Delaware. BOX 3150, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

EXPERIENCED COMMERCIAL refrigeration service engineer wanted for aggressive sales and service company located in Alabama. In business since 1932. Must be an air conditioning commercial and industrial installation service man with at least 10 years experience. State previous experience and references. BOX 3148, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

LIQUIDATING 4,000 Aetna Sani-seal refrigerator cabinet lid assemblies, attractive prices, all replacement sizes and types in stock. AETNA RUBBER PRODUCTS, INC., 815 E. 79th St., Cleveland, Ohio.

SURPLUS "FREON" valves! 1,500 new clean valves priced under jobbers cost, freight prepaid. Kerotest # 461S 2 1/4" wing-cap globe @ \$19.76. # 574S 1 1/4" wing-cap globe @ \$8.55. # 6981S 3/4" angle packless @ \$3.00. # 2355 3/4" receiver valves @ 75¢. # 51S300 3/4" relief @ \$2.00. ANCHOR SUPPLY CO., 1742 Fourth South, Seattle 4, Wash.

LARGE QUANTITY: 3/4" flare nuts, brass, standard, 5¢ each; 3/4" flare forged tees, 17¢ each; 3/4" flare by 1/4" M.P. elbows, 10¢ each; 3/4" flare by 1/2" Fem. P. elbows, 48¢ each; 3/4" flare by 3/4" Fem. P. elbows, 22¢ each; 3/4" flare by 1/2" Fem. P. elbows, 13¢ each. Henry diaphragm packless angle valves, 1 1/2" O.D., \$11.00 each; 1 1/4" O.D., \$7.00 each. Silica gel, 25 lb. cans, \$3.00 per can. Rubberized fabric door gasket, cushion width 1/2", flange width 3/4", 4¢ per ft. Frigidaire leak detectors, \$1.50 each. IRWIN L. ARDEN COMPANY, 83 Scarborough Rd., Pawtucket, R. I.

TUNNEL BLAST freezers. Hussmann. Brand new complete with baskets, expansion valve, and heat exchanger. Rated 18,000 BTU's at 10° TD. \$450.00 each. BIMEI CO., Cincinnati, Ohio.

SEALED UNITS rebuilt and exchanged. Prompt service on Coldsport (sealed & semi-sealed). Chieftain, Gale, Tecumseh, Norge and many others. One year guarantee. Write for price list and shipping instructions. BRIGHTON, 3906 Joy Rd., Detroit 6, Michigan.

WATER COOLERS: Kelvinator, ten gallon capacity, new in crates and ready to be shipped, \$159.00 each. Beam scales: Fairbanks, a few left; every meat man needs six or more. Priced at \$19.50. This is a buy you may never get again. The above is F.O.B. Phila., Pa. GENERAL REFRIGERATOR CO., 856 No. Broad St., Phila., Pa. ST. 7-2240 and 2241.

CLOSING OUT forged brass fittings below cost. 1/2" IPS x 3/4" flare, # 445 Kerotest angle valves, 95 cents each. 1/2" IPS x 3/4" flare, 90° elbows, 25 cents each. F.O.B. Chicago. C. B. GOODMAN & CO., 6459 S. Morgan St., Chicago 21, Illinois.

KEL-KOLD HERMETIC condensing units at sacrifice. 1/4 H.P.—\$30.00, 1/2 H.P.—\$35.00, controls extra. All units new and complete and carry one year warranty. "F-12" fan cooled type with 110 volt, 60 cycle, G.E. motors. KEL-KOLD CO. INC., 31-35 Beaver St., Johnstown, N. Y.

CHIEFTAIN HERMETICS (new): 1/4 H.P. \$42.00 ea.; without condenser \$39.00; in lots of 10 \$37.00 ea.; in lots of 10 less condenser \$34.00 ea. New thermostatic expansion valves: Sporlan Stand. 1/2 T M

3/4 x 1/2 \$5.50 ea.; Sporlan Stand. 1/2 T F 10" super 1/4 x 1/4 P. \$4.50 ea.; Detroit non-adj. 893 X 1/2 T F 15 3" super 1/4 x 1/4 for home freezers or domestic \$1.50 ea. Seals, GE compressor parts and fittings at 1/2 price. Send for surplus sheet. NORTHLAND REFRIGERATION COMPANY, 1742 Wabansia Avenue, Chicago 22, Illinois.

FOR SALE: (50) bottle coolers, 5 ft. size, stainless steel interior and exterior, complete with blower coil: 3 or more, \$175.00 each; single, \$200.00. Write or call: REFRIGERATION DISTRIBUTORS, INC., 317 Penn Avenue, Pittsburgh, Pa. Phone: GRant 0315.

FOR SALE: (24) Panelectric automatic ice makers, 1/2 H.P. water cooled compressor, thermostats, expansion valves, and coils: for quick sale, \$100.00 each. Parts alone worth double, act quick. REFRIGERATION DISTRIBUTORS, INC., 317 Penn Avenue, Pittsburgh, Pa. Phone: GRant 0315.

NEW AIR cooled condensers. Bush or Fedders standard construction—6 fins to the inch, all hot dipped (not painted) brazed connections, at approximately 75% to 80% off regular price. 1/2 HP. 2 row, 14 1/2" L. 10 1/2" H., only \$3.95. 1/2 HP. 3 row, 14 1/2" L. 10 1/2" H., only \$5.85. 1/2 HP. 4 row, 14 1/2" L. 10 1/2" H., only \$7.95. 1 1/2 HP. 3 row, 32 1/2" L. 15 1/2" H., only \$19.95 (shrouded). 2 HP. 3 row, 37" L. 15 1/2" H., only \$22.95 (shrouded). 1/2 HP. 4 x 9 1/4" seamless liquid receiver with valve and strainer, \$4.95. 1/2 HP. 5 1/4 x 9 1/4" seamless liquid receiver with valve & strainer, \$6.95. Standard BX connectors—4¢, squeeze type—6¢. General Electric motor, 2 HP. 3 ph. 220-440—\$64.80. Leland electric motor, 3 HP. 3 ph. 220-440V—\$71.95. Belden #14 white or red EX flex, plastic lead wire—2¢ ft. Order your season's requirements now! Complete stock of Ranco controls, Mueller tubing and fittings, General and Mayson valves, Dayton belts, Chieftain compressor parts, Chromalox range units. We ship anywhere. RINEHART INC. (Since 1930), Richmond, Indiana. Phone 2581.

SUBJECT TO prior sale: Hermetic Chieftain units: 1/4 H.P.—\$44.50; 1/2 H.P.—\$44.50. Other well known hermetics: 1/2 H.P. fan cooled—\$52.50; 1/4 H.P. fan cooled—\$57.50; 1/2 H.P. fan cooled heavy duty—\$69.50. Open units—standard makes: 1/4 H.P.—\$56.00; 1/2 H.P.—\$64.50; 1/2 H.P.—\$84.50. 1 1/2 H.P. air or water cooled Universal Cooler—\$199.00; 2 H.P. air or water cooled Universal Cooler—\$224.00; 3 H.P. air or water cooled Universal Cooler—\$259.00. All above units new and in original crates. Air cooled condensers: 3 row, 1 pass, 13" x 12" x 3"—\$3.95; 4 row, 4 pass, 13" x 11" x 4 1/4"—\$4.45; 4 row, 2 pass, 18" x 12" x 4 1/4"—\$6.25. Upright receiver tanks, shut off valve, 4" x 11"—\$2.65. Penn low or high pressure control type, 260 Apol—\$3.75. Detroit Lubricator L. P. control—\$4.00. G. E. blower fan motor with fan—\$4.50. Superior heat exchanger, 13" overall, 3/4" x 3/4"—\$4.75; Mueller heat exchanger, 14 1/2" overall, 3/4" x 3/4"—\$5.00; Marlo heat exchanger, 21" overall, 1 1/2" x 1 1/4"—\$7.50. Kramer Trenton panel blower complete with heat exchanger 1/2 to 1 ton—\$29.00. Superior master drier, 1/4" flare x 1 1/4" x 5 1/2"—75¢. Weatherhead drier, 1/4" flare x 1 1/4" x 6 1/4" (lots of 10)—65¢. U. S. "Freon" gauge 4 1/2" face, 30" vac. 150# or 300# with corresponding temp. scale, red warning hand, mounting holes—\$4.50. Scientific dial thermometer, 4 1/2" face, minus 40 to plus 120, 5 ft. tube, mounting holes—\$4.50. Kanco type k.w. 412 cold control complete—\$4.00. WALTER W. STARR, 1207 George St., Chicago 13, Ill.

SURPLUS FOR sale—all new Acme shell & tube condensers for "Freon." (Manufactured by Acme Mfg. Co., Jackson, Michigan.) 17—SC-300 @ \$46.00, 40—SC-500 @ \$63.00, 10—J-1000 @ \$134.00, 10—J-1500 @ \$162.00. Subject to prior sale. Send orders for any quantity. UNITED STATES AIR CONDITIONING CORPORATION, Minneapolis 14, Minnesota.

FRANCHISES AVAILABLE

PITTSBURGH CHEMICAL Laboratory licensed under Research Corporation patents has pioneered in developing vaporizing units for Triethylene Glycol-Air Purification grade. This field has been given a great deal of publicity in Hygeia, Readers Digest, and Science Illustrated. We have franchises available for an individual or group financially able to handle business of some \$300,000 to \$500,000 annually for Detroit, New Orleans, Cincinnati, Boston, Denver, San Francisco, Los Angeles, Phoenix, Dallas, Washington, D. C. All other points in America are at present closed. Write, phone, wire PITTSBURGH CHEMICAL LABORATORY, Pittsburgh 22, Pa., for full particulars.

BUSINESS OPPORTUNITIES

SALESMAN OR distributor wanted to handle a remarkable new development which may find large application in the refrigeration industry. Small item selling for \$2.50 to service men. Easy to sell and easy to carry. Advise territory covered and past experience. Write BOX 3147, Air Conditioning & Refrigeration News.

Available from
1/2 to 10 H.P.

**CLEANABLE
DOUBLE-TUBE
COUNTER-FLOW
WATER-COOLED
CONDENSERS**

Write for literature

Halstead & Mitchell
BESSEMER BLDG.
PITTSBURGH 22, PA.

Subscribe Now

Receive the greatest trade paper in the Industry—AIR CONDITIONING & REFRIGERATION NEWS. Published every week. Brings you latest news and vital information on household refrigeration, commercial refrigeration, air conditioning, home freezers; manufacturing, distributing, retailing, servicing, and contracting. Only \$5 per year, 52 issues.

Fill in coupon and mail today

AIR CONDITIONING & REFRIGERATION NEWS
450 West Fort Street, Detroit 26, Michigan

Gentlemen: Send the NEWS for one year.

☐ \$5 enclosed ☐ Bill me ☐ Bill the company

Name.....

Company.....

Street.....

City.....Zone.....State.....

4-11-49

Mueller Brass Net Income Drops For Quarter Ending February 28

PORT HURON, Mich.—A net income of \$216,244, or 40 cents per common share, for the quarter ending Feb. 28 was reported recently by the Mueller Brass Co. here. This compared with a net income of \$577,688, or \$1.09 per share which was earned during the same period last year.

Here's proof... THE PERFECT COMBINATION



* Cross-Flo with female x male * E-Z-SEE

Here's "a picture" of perfection—taken from a working installation showing the 'no-clog, no-pressure drop' Cross-Flo Drier-Filter in combination with the 100% leakproof and foolproof E-Z-SEE Liquid Indicator.

If you haven't yet used or seen Cross-Flo and E-Z-SEE—see them today at your wholesalers or write for Remco's illustrated instructive circulars.

REMCO
INCORPORATED
ZELIENOPLE, PENNSYLVANIA

Refrigeration Problems and their Solution by Paul Reed For Service and Installation Engineers



Paul Reed

Refrigerants (3)

As previously stated, there is very little difference in the efficiencies of the various refrigerants. In fact, in the theoretical, perfect cycle, there would be no difference at all. The efficiencies of the equipment may vary considerably and are of much greater importance than the difference in efficiencies of the refrigerants themselves.

HORSEPOWER PER TON

Several other characteristics that have a bearing on the relative costs of operation are "Horsepower per Ton," "B.t.u. per Watt," and "Coefficient of Performance." Although the efficiencies of the equipment itself are deciding factors, the refrigerants themselves do vary somewhat in these characteristics. Also these characteristics vary with evaporator and condenser temperatures.

As the term implies, "Horsepower per Ton" is the figure that is obtained by dividing the refrigerating capacity of the system, expressed in tons of ice melting effect per 24 hours, by the actual horsepower (not necessarily the motor rating) used in producing the refrigeration.

It, Hp./Ton, goes down as the evaporator temperature goes up, and goes up as the condensing temperature goes up. Other things being equal, the Horsepower per Ton is less and, therefore, the cost of operation per ton of refrigeration is less on an air conditioning installation than on a freezer room. On the other hand, the Horsepower per Ton, and therefore the cost of operation, rises in the summer when the condensing water or air becomes warmer.

Under Standard Ton conditions (5° evaporating and 86° condensing) most of the common refrigerants have a Horsepower per Ton of a little over one. One or two refrigerants, notably carbon dioxide have very high Horsepower per Ton factors. In the case of carbon dioxide, this is largely due to its low critical pressure, so that, even at ordinary condensing temperatures, the condensing pressure is rather close to the critical pressure. The Horsepower per Ton factor for ammonia is comparatively low, being .981 at Standard Ton conditions of 5° evaporating and 86° condensing.

B.T.U. PER WATT

In the smaller sizes of refrigerating systems, such as used in household refrigerators and small commercial applications, it would be awkward to use fractional Horsepower per Ton figures. Instead, the term most commonly used is "B.t.u. per Watt," which expresses the same idea, but uses smaller units.

Moreover, it is just the opposite, for B.t.u. per Watt goes up as Horsepower per Ton goes down. Also B.t.u. per Watt goes up as the evaporator temperature and capacity go up, and goes down as condensing temperatures go up.

COEFFICIENT OF PERFORMANCE

Another way of expressing the efficiency of a refrigerating system is in "Coefficient of Performance" which is the output, or capacity of the system in B.t.u. divided by the input, also expressed in B.t.u. If the condensing unit is powered by an electric motor the current drawn by the motor in watts is the input. This can be changed to B.t.u. by multiplying the watts input by 3.412, for one watt of electricity is equivalent in energy to 3.412 B.t.u. of heat.

Thus, if a refrigerating machine delivers one ton of refrigeration, or 12,000 B.t.u. per hour and the motor draws 2,000 watts per hour or 2 kwh., the Coefficient of Performance, or COP as it is often abbreviated, will be:

$$\frac{12,000}{2,000 \times 3.412} = 1.76$$

This means that the refrigerating machine is removing out of the refrigerator 1.76 times as much energy as the motor uses in driving the compressor.

The Coefficient of Performance of

ammonia is high, compared to some of the other refrigerants. For large installations such as in packing houses, ice plants, and breweries, the efficiency of the refrigerant, expressed in terms of Horsepower per Ton or in Coefficient of Performance is an important consideration, and thus ammonia was, and still is, well suited as the refrigerant for those large tonnage installations.

Although the efficiency of the refrigerant for fractional or small tonnage applications cannot be ignored, it is less important than some of the other characteristics, such as pressures, densities, heat content, latent heat, etc. The foregoing properties of ammonia affect very strongly the design of the refrigerating equipment, such as the compressor displacement, the type of valves, the size of the lines, the strength of the materials, etc. All of these were favorable to the use of ammonia in the large tonnage installations, which comprised practically all of the early applications.

ACTION OF AMMONIA ON COPPER ALLOYS

Another property of a refrigerant that has a direct bearing on the design of the equipment and especially

on the kind of material that can be used in the equipment, is the chemical action of the refrigerant on the materials of which the compressor, lines, coils, etc., are made.

Perfectly dry ammonia would have little or no harmful effect on the common metals or other materials inside the system that are thus exposed to the ammonia. However, there is bound to be quite a little moisture in a large installation. The combination of ammonia and water forms aqua-ammonia which attacks copper, brass, or bronze. Therefore, these metals must not be used in ammonia systems.

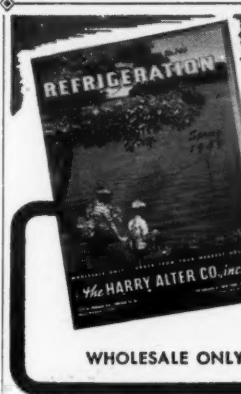
This limits the bearings to babbit or similar materials and rules out brass valve seats and inserts. Also it prevents the use of copper tubing either in the lines or in the condenser or evaporator. Copper, brass, bronze, and other alloys of copper have higher rates of heat transfer than iron and steel, so the heat-transfer surfaces of the evaporators and condensers, made of steel for use with ammonia must be proportionately greater.

In late years, aluminum and stainless steel have been increasingly used with ammonia to reduce weight, increase the rate of heat transfer, and to reduce the corrosion and rusting of the iron and steel in the piping, condensers, evaporators, and other auxiliary devices.

(To Be Continued)

Mills Heads Sales Promotion In Westinghouse Northwest Area

PITTSBURGH—C. W. Mills has been appointed sales promotion manager for the northwestern district of the Westinghouse Electric Corp., according to a company report.




Here's Your Copy of the New
DEPENDABOOK No. 149

**Refrigeration
PARTS CATALOG**

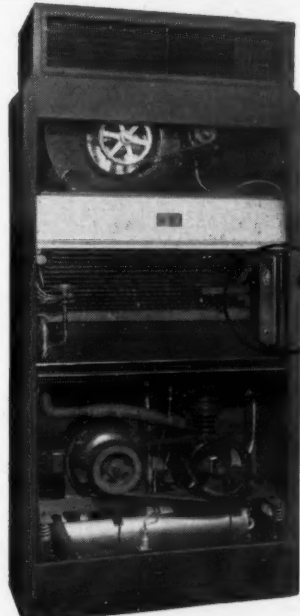
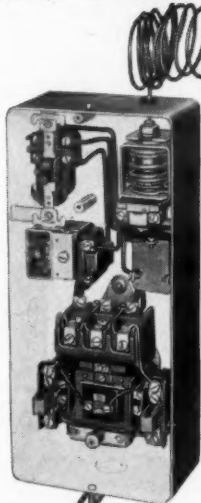
Send for this to-the-trade-only catalog of refrigeration parts and supplies... Very complete... Very handy to use... In use all over the world!

The HARRY ALTER CO.
1728 S. Michigan Ave., Chicago 16, Ill.
134 Lafayette Street, New York 13, N.Y.





Open and closed view of Allen-Bradley Special Refrigeration Control Unit consisting of Bulletin 709 Solenoid Starter, Bulletin 836 High Pressure Cutout, Bulletin 837 Thermostat with adjustable knob, and a Bulletin 600 Manual Starting Switch.

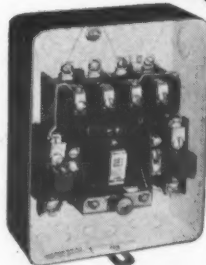


Typhoon Prop-R-Temp self-contained air-conditioner unit showing Allen-Bradley Special Refrigeration Control Unit.

TYPHOON



AIR-CONDITIONERS equipped with Trouble-Free Motor Controls



Bulletin 709, Size 1 Solenoid Starter. Compact, simple, and trouble-free. Ample wiring space.

WHY ARE ALLEN-BRADLEY STARTERS SO POPULAR for air-conditioning service? . . . Because they are trouble-free. Only one moving part. No pivots, pins, or bearings to corrode or stick . . . no jumpers to break. You install them . . . and forget them!

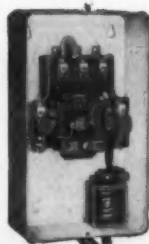
NO CONTACT MAINTENANCE. Allen-Bradley patented silver alloy contacts never need cleaning, filing, or dressing.

DEPENDABLE OVERLOAD RELAYS. Allen-Bradley thermal relays are accurate and dependable even after long service.

The A-B trademark stands for millions of trouble-free operations. Allen-Bradley Co., 1313 S. First St., Milwaukee 4, Wisconsin.

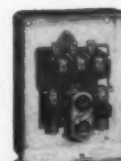
ALLEN-BRADLEY AIR-CONDITIONING AND REFRIGERATION CONTROLS

PRESSURE AND TEMPERATURE CONTROLS

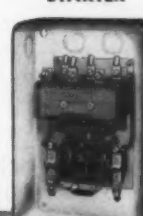


High-pressure cutout and motor starter in same enclosure. Temperature controls can be mounted with motor starter in same way.

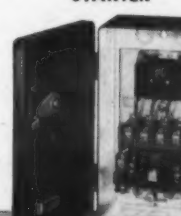
MANUAL STARTER



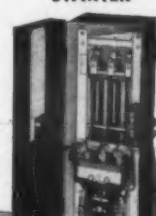
AUTOMATIC STARTER



COMBINATION STARTER



HEAVY COMPRESSION STARTER



ALLEN-BRADLEY
SOLENOID MOTOR CONTROL

QUALITY

REMA-REWA Sessions Air Mutual Problems



A joint meeting of the directors of Refrigeration Equipment Manufacturers Association and Refrigeration Equipment Wholesalers Association was a feature of the recent annual meeting of Rema. Problems of mutual interest were discussed, and future programs that may be of interest to both groups were outlined.

Annual Meeting--

(Concluded from Page 1, Column 3)
Hussmann Refrigeration, Inc., secretary.

Newly elected directors of the association are H. Blake Thomas, McQuay, Inc.; Jack Searls, White-Rodgers Electric Co.; A. R. Benua, Ebco Mfg. Co.; R. H. Israel, Virginia Smelting Co.; K. B. Thorndike, Detroit Lubricator Co.; John E. Dube, Alco Valve Co.; W. F. Switzer, Frigidaire Div., General Motors Corp.

Others continuing to serve as members of the board are H. F. Hildreth, Westinghouse; Paul L. Craft, Mueller Brass Co.; J. F. Dailey, Typhoon Air Conditioning Co., Inc.; J. Kingsley Noel, Jr., Victor Products Corp.; Howard R. Roberts, Whiting Corp.; R. L. Sears, Lynch Corp.; W. A. Siegfried, Superior Valve & Fittings Co.; and W. J. Stelpflug, Hussmann Refrigeration, Inc.

Among the major items of interest brought before the Rema membership were the following:

1. A favorable report by the committee in charge on the series educational conferences and exhibitions held during the past year, with the recommendation that they be continued in the interim period between All-Industry Show dates.

2. A report on the activities of the Refrigeration Industry Safety Advisory Committee (RISAC), including a discussion of certain safety and licensing legislation now under consideration.

3. A report on the expanded activities of the Rema credit group, with an expansion of services and meetings, with the commentary that increased delinquencies (the highest since 1942) are bringing a need for closer attention to credit matters.

Retiring president Hildreth in his report to the membership outlined the moves that resulted in the appointment of Brumbaugh as the new executive secretary, and Mills as public relations director and assistant executive secretary, and the moving of the association's offices from Pittsburgh to Washington, D. C.

The new Washington office has been fitted out with the latest type of office equipment and supplies, and a five-person staff is employed, which includes—in addition to Brumbaugh and Mills—a full time man on credits and industry statistics, two full time women assistants.

14 COMMITTEES CONDUCTING IMPORTANT PROGRAMS

Hildreth praised the work of the various association committees, and pointed out that of a total of 17 permanent committees appointed, 14 have met and conducted programs of importance. He recommended continuation of the educational conferences on the basis of personal observations, and asked vigorous backing of the All-Industry Show, pointing out that:

"Success of the All-Industry Show is of prime importance to Rema. This is one trade show run for the benefit of the industry."

The retiring president stated that

the public relations program under Rema's own director George Mills, had been eminently successful, with more lineage obtained than had been possible through outside counsel. In addition, Mills acted as director for the educational conferences.

Pointing out that the matter of standards is becoming a more active issue with a number of the Product Groups, Hildreth urged that Rema set up to cooperate in the development of sound product standards, and where outside groups are involved, to cooperate with them on an equitable basis.

To develop such a program, a task committee from the board of directors had been appointed, charged with the task of studying how standards are successfully handled in other trade associations.

RISAC SUPPORTS B-9 CODE

In presenting the report on RISAC, which Rema and other groups in the industry support, W. J. Stelpflug of Hussmann Refrigeration pointed out that it has as its general objectives the encouragement of the use of the ASA-B9 safety code on mechanical refrigeration for guidance whenever a government unit shows an inclination to set up a code, and to disseminate information regarding the pros and cons of licensing codes.

The end objective is to eliminate needless restrictions and costs in the distribution of refrigeration equipment.

RISAC now has a permanent office and a full-time executive secretary and is collecting information on proposed state legislation affecting installation of refrigeration equipment. These proposed measures are analyzed and, if the legislation seems adverse to the general welfare of the public and the refrigeration industry, an analysis of the bill, together with recommendations and comments, is sent to the RISAC committee members, to their respective association, and to other interested parties.

Thus, when in Massachusetts a bill was proposed requiring that all men servicing or installing refrigerator or air conditioners must be licensed steamfitters, the various supporting groups were so advised.

The following report from RISAC headquarters on the proposed State of Washington House of Representatives Bill No. 591, governing installation of refrigeration and air conditioning equipment:

"This act covered the appointment of a commission of five men by the governor to hold office at his pleasure. The commission is to consist of: The Director of Labor & Industry as chairman; the Director of Licenses; a member of the Department of Health; two licensed contractors.

"This Commission is to set up minimum standards for refrigeration using the B9 code as far as they feel practicable, but may modify it as they wish.

"They are to license all contractors; or, in other words, no work may be done on installations or repairs except under the supervision of a licensed man (known as the manager) in the employ of a contractor holding the license, known as the

holder. The license fee is \$50 annually, and the licensee must put up a \$1,000 bond.

"This means that there is no certainty of the B9 code being adopted in full or that restrictions will not be more severe than that code.

"It also means that all installations of refrigeration and air conditioning equipment in other than one and two-family residences will require a permit except that approved unit household refrigerators and unit home freezers containing less than 6 lbs. of refrigerant, or unit commercial refrigerators, unit water coolers, unit commercial farm freezers, and units commercial conditioners containing 6 lbs. or less of Group 1 refrigerant will not need a permit.

"The Act requires that all work shall be done under the supervision of a licensed mechanic in the employ of a contractor (who may be himself) who holds that license.

"RISAC feels that such a bill is not the public benefit since it does not assure a code as liberal as the ASA-B9 code.

"It is also not, in the opinion of RISAC, to the best interests of the public and of the refrigeration industry because of the licensing provisions contained in the proposed act.

LICENSING NO GUARANTEE OF SAFE INSTALLATIONS

"Licensing is frequently promoted in the guise of safety legislation. It is RISAC's conviction that licensing does not in itself, assure safe refrigeration installations, because the ability of a person to pass an examination offers no positive proof that he can or will execute safe refrigeration work. On the other hand, a practical safeguarding of the public can and will be assured by the properly

Product Section Meetings Aid Manufacturers



Product section meetings, in which members who produce a particular type of equipment meet to discuss pertinent problems in their particular field, are a regular part of the Rema meeting program. Here the Condensing Unit Product Section is pictured in meeting, with J. W. Thomas of Brunner Mfg. Co., section chairman, presiding.

constituted inspection procedure.

"As inspection of a refrigeration installation generally precedes the operation of the installation, licensing of contractors and servicemen is an unnecessary complement to inspection from the standpoint of safety; the inspection can be made and any defects corrected before the installation is started.

"RISAC is of the opinion that licensing charges must be reflected in the costs of refrigeration installations without necessarily increasing the quality of such installations. Furthermore, licensing requirements provide the means for abuses such as the limiting of competition by excessive fees, through other unreasonable requirements, and through administration by examining boards which may be somewhat less than

impartial.

"Excessive fees, unreasonable examination requirements, and other similar features tend to create barriers to free enterprise and to interstate or intercommunity commerce."

The report on the All-Industry Refrigeration & Air Conditioning Exposition, which Rema sponsors, and which will be held Nov. 14-18 in Atlantic City, revealed that 133 companies have signed up for a total of 315 booths thus far. Standard booth sizes are 10 x 10 ft., a little smaller than those in the other postwar All-Industry Show.

The Atlantic City show will mark the first time the All-Industry affair has been held in the east, and many in the industry who have never attended before are expected to be on hand.

TOPS

IN-THE-FIELD!



THERMOBANK

Reg. U.S. Pat. Off.

by **KRAMER**

The outstanding development in the refrigeration field in the past decade.

The standard of the industry for complete automatic defrosting at temperatures below 32°.

SPECIFY THE BEST.. SPECIFY....

THERMOBANK

---THE STANDARD OF THE INDUSTRY

Write for Bulletin R-124

NEED COLD PLATES? Call DEAN!!!

For ice cream cabinets, locker plants, soda fountains, farm milk coolers, farm freeze cabinets, low temperature test rooms, window displays, etc.

CHOICE TERRITORIES OPEN FOR
FACTORY REPRESENTATION

DEAN PRODUCTS, INC.

1042 DEAN ST., BROOKLYN, N. Y.



KRAMER TRENTON CO. Trenton 5, N. J.

THERMOBANK - COOLMASTER - RADIAL UNITS - PANEL UNITS - CUBERS - FINNED COILS - BARE TUBE COILS - HEAT INTERCHANGERS - CONDENSERS Air Cooled, Water Cooled, Evaporative - WATER COOLING EVAPORATORS - BLAST COOLING COILS - BLAST HEATING COILS.